

EXHIBIT C

AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
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In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been
 filed in the U.S. District Court Western District of Texas on the following

☐ Trademarks or ☒ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO. 6:20-cv-209	DATE FILED 3/22/2020	U.S. DISTRICT COURT Western District of Texas
PLAINTIFF WSOU INVESTMENTS, LLC d/b/a BRAZOS LICENSING AND DEVELOPMENT		DEFENDANT Huawei Investment & Holding Co., Ltd., Huawei Technologies Co., Ltd., Huawei Technologies USA Inc., Huawei Device USA, Inc.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 US 8.249,446	8/21/2012	WSOU Investments, LLC
2		
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4		
5		

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY <input type="checkbox"/> Amendment <input type="checkbox"/> Answer <input type="checkbox"/> Cross Bill <input type="checkbox"/> Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
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In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE
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Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
 Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
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 filed in the U.S. District Court Western District of Texas on the following

☐ Trademarks or ☒ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO. 6:20-cv-542	DATE FILED 6/17/2020	U.S. DISTRICT COURT Western District of Texas
PLAINTIFF WSOU INVESTMENTS, LLC d/b/a BRAZOS LICENSING AND DEVELOPMENT		DEFENDANT Huawei Technologies Co., Ltd., Huawei Technologies USA Inc.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 US 8.249,446	8/21/2012	WSOU Investments, LLC
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UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/649,606	08/21/2012	8249446	805792-US-NP	5836

22046 7590 08/01/2012
 Alcatel-Lucent USA Inc
 600-700 Mountain Avenue
 Docket Administrator - Room 3B-212F
 Murray Hill, NJ 07974

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
 (application filed on or after May 29, 2000)

The Patent Term Adjustment is 254 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

Joseph L. Smith, Fuquay Varina, NC;
 David G. Eckard, Knightdale, NC;

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.

Doc code: IDS

PTO/SB/08a (01-10)

Doc description: Information Disclosure Statement (IDS) Filed

Approved for use through 07/31/2012. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		12649606
	Filing Date		2009-12-30
	First Named Inventor	Joseph L. Smith	
	Art Unit	2613	
	Examiner Name		
	Attorney Docket Number	805792-US-NP	

U.S.PATENTS						
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1					

If you wish to add additional U.S. Patent citation information please click the Add button.

U.S.PATENT APPLICATION PUBLICATIONS						
Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
/D.T./	1	20090123154	A1	5-14-2009	Dalton et al.	

If you wish to add additional U.S. Published Application citation information please click the Add button.

FOREIGN PATENT DOCUMENTS								
Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ²	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T ⁵
	1							<input type="checkbox"/>

If you wish to add additional Foreign Patent Document citation information please click the Add button

NON-PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵

Change(s) applied

to document,

/L.A.S./

5/25/2012

EFS Web 2.4.17

Complete and send this form, together with applicable fee(s), to: Mail

Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

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CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

Patty Giebler (Depositor's name)
Patty Giebler (Signature)
7-5-12 (Date)



22046 7590 04/10/2012
 Docket Administrator - Room 3D-201E
 Alcatel-Lucent USA Inc.
 600-700 Mountain Avenue
 Murray Hill, NJ 07974

07/09/2012 EEKUBAY2 00000048 122325 12649606

01 FC:1501 1740.00 DA
 02 FC:1504 300.00 DA

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/649,606	12/30/2009	Joseph L. Smith	805792-US-NP	5836

TITLE OF INVENTION: METHOD AND APPARTUS FOR REGULATING ROGUE BEHAVIOR IN OPTICAL NETWORK TRANSMISSION DEVICES

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1740	\$300	\$0	\$2040	07/10/2012

EXAMINER	ART UNIT	CLASS-SUBCLASS
TRAN, DZUNG D	2613	398-025000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively,
 (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

Hitt Gaines, P.C.

2 _____
 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

ALCATEL LUCENT Paris, FrancePlease check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☒ Issue Fee
☒ Publication Fee (No small entity discount permitted)
☐ Advance Order - # of Copies _____

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- ☐ A check is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☒ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number 12-2325 (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature

Patty Giebler

Date

7-5-12

Typed or printed name

Patty Giebler

Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
 or **Fax** **(571)-273-2885**

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22046 7590 04/10/2012
 Docket Administrator - Room 3D-201E
 Alcatel-Lucent USA Inc.
 600-700 Mountain Avenue
 Murray Hill, NJ 07974



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Patty Giebler (Depositor's name)
Patty Giebler (Signature)
7-5-12 (Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/649,606	12/30/2009	Joseph L. Smith	805792-US-NP	5836

TITLE OF INVENTION: METHOD AND APPARTUS FOR REGULATING ROGUE BEHAVIOR IN OPTICAL NETWORK TRANSMISSION DEVICES

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
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ALCATEL LUCENT Paris, France

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☒ Publication Fee (No small entity discount permitted)
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NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature Patty Giebler
 Typed or printed name Patty Giebler

Date 7-5-12
 Registration No. _____

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NOTICE OF ALLOWANCE AND FEE(S) DUE

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 Murray Hill, NJ 07974

EXAMINER

TRAN, DZUNG D

ART UNIT

PAPER NUMBER

2613

DATE MAILED: 04/10/2012

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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12/649,606

12/30/2009

Joseph L. Smith

805792-US-NP

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TITLE OF INVENTION: METHOD AND APPARTUS FOR REGULATING ROGUE BEHAVIOR IN OPTICAL NETWORK TRANSMISSION DEVICES

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1740	\$300	\$0	\$2040	07/10/2012

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

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(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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12/649,606 12/30/2009 Joseph L. Smith 805792-US-NP 5836

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Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/649,606	12/30/2009	Joseph L. Smith	805792-US-NP	5836

22046 7590 04/10/2012
 Docket Administrator - Room 3D-201E
 Alcatel-Lucent USA Inc.
 600-700 Mountain Avenue
 Murray Hill, NJ 07974

EXAMINER

TRAN, DZUNG D

ART UNIT	PAPER NUMBER
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2613

DATE MAILED: 04/10/2012

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
 (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 254 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 254 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

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6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
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9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No.		Applicant(s)	
	12/649,606		SMITH ET AL.	
	Examiner		Art Unit	
	DZUNG TRAN		2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 02/07/2012.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.

3. ☒ The allowed claim(s) is/are 1-3,5-16 and 18-21.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some* c) ☐ None of the:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. ____.

3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: ____.

Applicant has **THREE MONTHS FROM THE "MAILING DATE"** of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.

(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.


Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. <input type="checkbox"/> Notice of References Cited (PTO-892) 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date ____ 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material	5. <input type="checkbox"/> Notice of Informal Patent Application 6. <input type="checkbox"/> Interview Summary (PTO-413), Paper No./Mail Date ____ 7. <input type="checkbox"/> Examiner's Amendment/Comment 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance 9. <input type="checkbox"/> Other ____
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/Dzung D Tran/ Primary Examiner, Art Unit 2613	
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Issue Classification 	Application/Control No. 12649606	Applicant(s)/Patent Under Reexamination SMITH ET AL.
	Examiner DZUNG TRAN	Art Unit 2613

ORIGINAL						INTERNATIONAL CLASSIFICATION												
CLASS		SUBCLASS				CLAIMED					NON-CLAIMED							
398		17				H	0	4	B	10 / 08 (2006.01.01)								
CROSS REFERENCE(S)																		
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)																	
398	25	33																

<input type="checkbox"/> Claims renumbered in the same order as presented by applicant <input type="checkbox"/> CPA <input type="checkbox"/> T.D. <input type="checkbox"/> R.1.47															
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
1	1		17												
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NONE		Total Claims Allowed:	
		19	
(Assistant Examiner)	(Date)		
/DZUNG TRAN/ Primary Examiner.Art Unit 2613	04/05/1012	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	2



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BIB DATA SHEET

CONFIRMATION NO. 5836

SERIAL NUMBER 12/649,606	FILING or 371(c) DATE 12/30/2009 RULE	CLASS 398	GROUP ART UNIT 2613	ATTORNEY DOCKET NO. 805792-US-NP	
APPLICANTS Joseph L. Smith, Fuquay Varina, NC; David G. Eckard, Knightdale, NC; ** CONTINUING DATA ***** This appln claims benefit of 61/273,702 08/07/2009 ** FOREIGN APPLICATIONS ***** ** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** 01/14/2010					
Foreign Priority claimed <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 35 USC 119(a-d) conditions met <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Verified and Acknowledged <u>/DZUNG D TRAN/</u> Examiner's Signature	<input type="checkbox"/> Met after Allowance Initials	STATE OR COUNTRY NC	SHEETS DRAWINGS 4	TOTAL CLAIMS 20	INDEPENDENT CLAIMS 3
ADDRESS Docket Administrator - Room 3D-201E Alcatel-Lucent USA Inc. 600-700 Mountain Avenue Murray Hill, NJ 07974 UNITED STATES					
TITLE Method and Appartus for Regulating Rogue Behavior in Optical Network Transmission Devices					
FILING FEE RECEIVED 1220	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:		<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees (Filing) <input type="checkbox"/> 1.17 Fees (Processing Ext. of time) <input type="checkbox"/> 1.18 Fees (Issue) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit		


EAST Search History**EAST Search History (Prior Art)**

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1	(joseph near2 smith).in. and (rogue near3 flag near3 register)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2012/04/05 10:46
L2	1	(david near2 eckard).in. and (rogue with register)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2012/04/05 10:46
L3	682	398/25.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2012/04/05 10:47
L4	2	((rogue bad fail\$3 good pass) near3 flag near2 set) and 3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2012/04/05 10:47
S1	1	12/649606	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/10/28 12:20
S2	1273	(joseph near2 smith).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/10/28 12:50
S3	1	(joseph near2 smith).in. and (rogue with register)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/10/28 12:51
S4	1	(david near2 eckard).in. and (rogue with register)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/10/28 12:52
S5	7	memory same (rogue with register)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/01 10:22
S6	765	((rogue bad fail\$3) near2 flag) with (register memory))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/01 10:35
S7	230	((rogue bad fail\$3) near2 flag) with (register memory)) and threshold\$1	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/01 10:35
S8	42	((rogue bad fail\$3) near2 flag) with (register memory)) and threshold\$1 and optical	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/01 10:36

S9	39	((rogue bad fail\$3) near2 flag) with (register memory)) and threshold\$1 and optical and monitor\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/01 10:56
S10	7	((rogue bad fail\$3) near3 flag near2 set) with (register memory)) and threshold\$1 and optical and monitor\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/01 11:26
S11	2	"20090123154"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/04 13:02
S12	1	((rogue bad fail\$3) near2 flag) with (register memory)) and "olt" and (onu ont)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/04 13:21
S13	19	((rogue bad fail\$3) near3 flag near2 set) with (register memory)) and optical and monitor\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/04 13:22
S14	20	((rogue bad fail\$3 good pass) near3 flag near2 set) with (register memory)) and optical and monitor\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/04 13:23
S15	56	((rogue bad fail\$3 good pass) near3 flag near2 set) with (register memory stor\$3)) and optical and monitor\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/04 13:24
S16	2	"20070237523"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/04 14:06
S17	2	"20100066901"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/06 08:52
S18	2	"20100067901"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/06 08:52
S19	1141	398/1-2.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/06 10:46
S20	283	398/17.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/06 10:47
S21	533	398/33.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/06 10:47
S22	632	398/58.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/06 10:47
S23	471	398/70-71.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	OR	OFF	2011/11/06 10:48

			IBM_TDB			
S24	1	S19 and (((rogue bad fail\$3 good pass) near3 flag) with (register memory stor\$3)) and optical and monitor\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/06 10:48
S25	1	S20 and (((rogue bad fail\$3 good pass) near3 flag) with (register memory stor\$3)) and optical and monitor\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/06 10:49
S26	1	S21 and (((rogue bad fail\$3 good pass) near3 flag) with (register memory stor\$3)) and optical and monitor\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/06 10:49
S27	0	S22 and (((rogue bad fail\$3 good pass) near3 flag) with (register memory stor\$3)) and optical and monitor\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/06 10:49

4/ 5/ 2012 10:48:04 AM
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Search Notes 	Application/Control No. 12649606	Applicant(s)/Patent Under Reexamination SMITH ET AL.
	Examiner DZUNG TRAN	Art Unit 2613

SEARCHED			
Class	Subclass	Date	Examiner
398	1-2, 17, 25, 33, 58, 70-71	11/05/2011	TD
	Update search	04/05/2012	TD

SEARCH NOTES		
Search Notes	Date	Examiner
398/class as listed (USPAT; US-PGPUB; EPO; JPO and text search).See search history rintoutp	11/05/2011	TD

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner
398	25, 33	04/05/2012	TD

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ATTORNEY DOCKET NO. 805792-US-NP

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Joseph L. Smith
Serial No.: 12/649,606
Filed: December 30, 2009
Title: METHOD AND APPARATUS FOR REGULATING ROGUE
BEHAVIOR IN OPTICAL NETWORK TRANSMISSION DEVICES
Grp./A.U.: 2613
Examiner: Dzung D. Tran
Confirmation No.: 5836

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

I hereby certify that this correspondence is being electronically filed
with USPTO on: February 7, 2012 (Date)

Elizabeth Schumacher

(Printed or typed name of person signing the certificate)

/Elizabeth Schumacher/

(Signature of the person signing the certificate)

Sir:

AMENDMENT UNDER 37 C.F.R. § 1.111

In response to the Office Action delivered November 9, 2011, the Applicants respectfully
present the following submission.

Appl. No. 12/649,606
Reply to Examiner's Action dated November 9, 2011

IN THE CLAIMS:

1. (Currently Amended) A method of regulating rogue behavior in an optical network component comprising an optical transmitter, the method comprising:

monitoring a selected optical transmitter output indicator during at least one monitoring window;

determining whether an output threshold has been exceeded during the at least one monitoring window;

setting a suspect rogue flag in a register, if it is determined that an output threshold has been exceeded; and

removing the suspect rogue flag from the register if it is determined that the output threshold was not exceeded in a monitoring window occurring after the suspect rogue flag has been set
~~reading the register, by the optical network component, to determine if the suspect rogue flag has been set~~

2. (Original) The method according to claim 1, wherein reading the register comprises a plurality of successive readings, each to determine if the suspect rogue flag has been set.

3. (Original) The method according to claim 1, wherein the at least one monitoring window comprises a plurality of monitoring windows.

4. (Cancelled)

5. (Original) The method according to claim 1, further comprising determining whether to disable the optical transmitter.

6. (Original) The method according to claim 5, further comprising generating a command to disable the optical transmitter.

7. (Original) The method according to claim 5, wherein the optical network component is an ONT in a PON.

8. (Original) The method according to claim 7, further comprising attempting to transmit a PON status request message from the ONT to an OLT prior to determining whether to disable the optical transmitter.

9. (Original) The method according to claim 8, further comprising determining not to disable the optical transmitter if a reply to the status request message is received from the OLT indicating that the PON is functioning satisfactorily.

10. (Original) The method according to claim 8, further comprising generating a command to disable the optical transmitter if no response is received from the OLT within a predetermined period of time.

11. (Original) The method according to claim 8, further comprising, if a reply to the status request message is received from the OLT indicating that the PON is not functioning satisfactorily, transmitting a temporary disable message to the OLT and generating a command to temporarily disable the optical transmitter.

12. (Original) The method according to claim 11, further comprising generating a command to disable the optical transmitter, after expiration of a disable period generating a command to enable the optical transmitter, and attempting to transmit a PON status update request message to the OLT.

13. (Original) The method according to claim 1, wherein the optical transmitter comprises a laser and the selected optical transmitter output indicator is the LBC.

14. (Original) The method according to claim 1, wherein the optical transmitter comprises a monitor photodiode and the selected transmitter output indicator is the MPC.

15. (Currently Amended) Apparatus for regulating rogue behavior in an optical transmission device, comprising:

an output indicator monitor;

a register for storing a suspect rogue flag if the output indicator monitor detects that an output indicator threshold has been exceeded during a monitoring window;

a reader for reading the register to determine whether a suspect rogue flag has been set;

and

a determiner for determining whether to disable the optical transmitter if a suspect rogue flag has been set; and

a timer for timing the duration between a temporary disable command and an enable command.

16. (Original) The apparatus according to claim 15, further comprising a command generator for generating optical transmitter disable commands.

17. (Cancelled)

18. (Original) The apparatus according to claim 15, further comprising an optical transmitter comprising a laser, and wherein the output indicator monitor monitors a laser bias current.

19. (Original) The apparatus according to claim 15, wherein the output indicator monitor monitors a monitor photodiode current.

20. (Currently Amended) An ONT for use in a PON, the ONT comprising:
a network interface comprising an optical transmitter and an optical receiver;
a memory device comprising a register;
an output indicator monitor for monitoring at least one output indicator of the optical transmitter;
a reader for reading the register to determine whether a suspect rogue flag has been set by the output indicator monitor; and
a determiner for determining whether to disable the optical transmitter if a suspect rogue flag has been set, and
a timer for timing the duration between a temporary disable command and an enable command.

Appl. No. 12/649,606

Reply to Examiner's Action dated November 9, 2011

21. (New) The apparatus according to claim 1, further comprising reading the register, by the optical network component, to determine if the suspect rogue flag is set.

REMARKS/ARGUMENTS

The Applicant has carefully considered this Application in connection with the Office Action and respectfully requests reconsideration of this Application in view of the foregoing amendment and the following remarks.

The Applicant originally submitted Claims 1-20 in the Application. In this submission the Applicant amends Claims 1, 15 and 20, and cancels Claims 4 and 17, without prejudice or disclaimer. The Applicant adds new Claim 21. This claim may be supported at least by, *e.g.* Claim 1 as filed. Accordingly, Claims 1-3, 5-16 and 18-21 are currently pending in the Application.

I. Allowable Subject Matter

The Applicant notes with appreciation that the Examiner has indicated that Claims 11, 12 and 17 include allowable subject matter. The Applicant amends Claim 15 to include the subject matter of Claim 17 thereby rendering Claims 15, 16, 18 and 19 allowable. The Applicant respectfully declines in this response to amend Claim 1 to include the subject matter of Claims 11 or 12.

II. Rejection of Claims 1-10, 13-16, and 18-20 under 35 U.S.C. § 103

The Office has rejected Claims 1-10, 13-16, and 18-20 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 7,215,891 to Chiang, *et al.* ("Chiang") in view of U.S. Patent Publication No. 2010/0067901 to Mizutani ("Mizutani"). The Applicant respectfully traverses the rejection.

As set forth above, Claim 15 is amended to include the subject matter of Claim 17, thereby rendering claims 15, 16, 18 and 19 allowable. Therefore the rejection of Claims 15, 16 18 and 19 is moot.

Appl. No. 12/649,606
Reply to Examiner's Action dated November 9, 2011

The Applicant amends Claim 20 herewith to include the subject matter of Claim 17. The Applicant respectfully asserts that amended Claim 20 is allowable under the same reasoning given by the Office for the allowability of Claim 17, *mutatis mutandis*.

Claim 1 is amended herewith to include the subject matter of Claim 4, now cancelled. As amended, Claim 1 recites

the method comprising:

...

removing the suspect rogue flag from the register if it is determined that the output threshold was not exceeded in a monitoring window occurring after the suspect rogue flag has been set.

The Office purports that Chiang teaches the subject matter of Claim 4. (*See* Office Action, pages 3-4, citing Chiang, column 4, line 64 to column 5, line 31 and column 9, lines 4-19.) The Applicant does not recognize within the cited portions of Chiang the subject matter of Claim 4, and respectfully asserts that a close reading of these portions does not support the Office's allegation that the subject matter of Claim 4 is taught therein. The Office has provided no reasoned explanation that the various aspects discussed by Chiang in the cited portions may reasonably be interpreted to teach or suggest the subject matter of Claim 4. Indeed, the Office Action merely quotes the language of Claim 4 and cites the portions of Chiang that allegedly teach or suggest the subject matter. Thus, the Office Action provides nothing more than a conclusory rejection of Claim 4 in violation of the guidance provided by the Supreme Court. (*See KSR International Co v. Teleflex Inc*, 127 S.Ct. 1727, 1740-41, 550 USPQ2d 1385, xxx (2007), citing *In re Kahn*, 441 F.3d 977, 78 USPQ2d 1329 (Fed. Cir. 2006). *See also* MPEP ¶ 2143.)) Furthermore, the Office has not cited Mizutani to cure the

deficiency of Chiang. Accordingly, the Office has not shown that the subject matter of Claim 4 is taught or suggested by the asserted combination.

While the procedural deficiencies cited above are sufficient to show the subject matter of Claim 4 is allowable, the Applicant respectfully asserts that this subject matter is not obvious over the combination of Chiang and Mizutani as the reference is applied by the Office. A stated purpose of Chiang is to identify an optical component in advance of failure so the component can be replaced before failure occurs. (*See, e.g.* Abstract.) In such a methodology, the Applicants do not recognize utility in first determining the optical component meets the criteria for advance replacement, and then reversing that determination. Indeed, one of ordinary skill in such circumstances would likely simply replace the optical component once it has been identified as being ready for replacement. Moreover, the Applicants do not find within the combination any recognition of a feature such as recited in Claim 4, nor does the Office identify within the references such a teaching or suggestion. Therefore, the Applicant respectfully asserts that amended Claim 1 is novel and nonobvious over the asserted combination.

The Applicant therefore respectfully asserts that Claim 1 as amended herewith is allowable. Claims 2, 3 and 5-14 are allowable at least because each depends from an allowable base claim. (*See* MPEP § 2143.03, citing *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).) Claims 15, 16 and 18-20 are allowable as set forth above. Accordingly, the Applicant respectfully requests that the Office issue a Notice of Allowance of Claims 1-3, 5-16 and 18-20.

Appl. No. 12/649,606
Reply to Examiner's Action dated November 9, 2011

III. New Claim 21

New Claim 21 is presented herewith for examination. The Applicant respectfully submits that this claim is allowable at least because it depends from an allowable base claim. Accordingly, the Applicant respectfully requests that the Office issue a Notice of Allowance of Claim 21.

IV. Conclusion

In view of the foregoing amendment and remarks, the Applicant now sees all of the Claims currently pending in this Application to be in condition for allowance and therefore earnestly solicits a Notice of Allowance for Claims 1-3, 5-16 and 18-21.

The Applicant requests the Examiner to telephone the undersigned attorney of record at (972) 480-8800 if such would further or expedite the prosecution of the present Application. The Commissioner is hereby authorized to charge any fees, credits or overpayments to Deposit Account 082395.

Respectfully submitted,

HITT GAINES, P.C.



Andrew R. Ralston
Registration No. 55,560

Dated: February 7, 2012

P.O. Box 832570
Richardson, Texas 75083
(972) 480-8800

Electronic Acknowledgement Receipt

EFS ID:	12020455
Application Number:	12649606
International Application Number:	
Confirmation Number:	5836
Title of Invention:	Method and Appartus for Regulating Rogue Behavior in Optical Network Transmission Devices
First Named Inventor/Applicant Name:	Joseph L. Smith
Customer Number:	22046
Filer:	Andrew R. Ralston/Elizabeth Schumacher
Filer Authorized By:	Andrew R. Ralston
Attorney Docket Number:	805792-US-NP
Receipt Date:	07-FEB-2012
Filing Date:	30-DEC-2009
Time Stamp:	16:37:39
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		805792amend.pdf	666421 6e3e769a3c5ebae313d2fb4631cbe92bd1b1cbbc	yes	10

Multipart Description/PDF files in .zip description

	Document Description	Start	End
	Amendment/Req. Reconsideration-After Non-Final Reject	1	1
	Claims	2	6
	Applicant Arguments/Remarks Made in an Amendment	7	10

Warnings:**Information:****Total Files Size (in bytes):**

666421

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875					Application or Docket Number 12/649,606		Filing Date 12/30/2009		<input type="checkbox"/> To be Mailed	
APPLICATION AS FILED – PART I										
(Column 1)			(Column 2)			SMALL ENTITY <input type="checkbox"/> OR		OTHER THAN SMALL ENTITY		
FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)	OR	RATE (\$)	FEE (\$)			
<input type="checkbox"/> BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A				
<input type="checkbox"/> SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A			N/A				
<input type="checkbox"/> EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A				
TOTAL CLAIMS (37 CFR 1.16(j))	minus 20 =	*	X \$	=		X \$	=			
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X \$	=		X \$	=			
<input type="checkbox"/> APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).									
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))										
* If the difference in column 1 is less than zero, enter "0" in column 2.					TOTAL		TOTAL			
APPLICATION AS AMENDED – PART II										
(Column 1)			(Column 2)			SMALL ENTITY OR		OTHER THAN SMALL ENTITY		
AMENDMENT	02/07/2012	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR	RATE (\$)	ADDITIONAL FEE (\$)	
Total (37 CFR 1.16(i))	* 19	Minus	** 20	= 0	X \$	=		X \$60=	0	
Independent (37 CFR 1.16(h))	* 3	Minus	***3	= 0	X \$	=		X \$250=	0	
<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))										
<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))										
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	0	
(Column 1)			(Column 2)			SMALL ENTITY OR		OTHER THAN SMALL ENTITY		
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR	RATE (\$)	ADDITIONAL FEE (\$)	
Total (37 CFR 1.16(i))	*	Minus	**	=	X \$	=		X \$	=	
Independent (37 CFR 1.16(h))	*	Minus	***	=	X \$	=		X \$	=	
<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))										
<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))										
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE		
<p>* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.</p> <p>** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".</p> <p>*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".</p> <p>The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.</p>										

Legal Instrument Examiner:
/TRINA STEPTOE/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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12/649,606

12/30/2009

Joseph L. Smith

805792-US-NP

5836

22046

7590

11/09/2011

Docket Administrator - Room 3D-201E

Alcatel-Lucent USA Inc.

600-700 Mountain Avenue

Murray Hill, NJ 07974

EXAMINER

TRAN, DZUNG D

ART UNIT

PAPER NUMBER

2613

MAIL DATE

DELIVERY MODE

11/09/2011

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary**Application No.**

12/649,606

Applicant(s)

SMITH ET AL.

Examiner

DZUNG TRAN

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 December 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 5) ☒ Claim(s) 1-20 is/are pending in the application.
- 5a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 1-10, 13-16 and 18-20 is/are rejected.
- 8) ☒ Claim(s) 11, 12 and 17 is/are objected to.
- 9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

Application/Control Number: 12/649,606
Art Unit: 2613

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DETAILED ACTION

Specification

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-10, 13-16 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chiang et al. US patent no. 7,215,891 in view of Mizutani US Publication no. 2010/0067901.

Regarding claims 1, 15 and 20, Chiang et al. discloses a method/apparatus of regulating rogue behavior in an optical network component comprising an optical transmitter, the method comprising:

monitoring a selected optical transmitter output indicator during at least one monitoring window (abstract, col.1, line 60 to col. 2, line 20);

determining whether an output threshold has been exceeded (col. 9, line 4-19, col.n 4, line 64 to col. 5, line 31);

setting a suspect rogue flag in a register, if it is determined that an output threshold has been exceeded and reading the register, by the optical network component, to determine if the suspect rogue flag has been set (col. 5, lines 29-64).

Chaing discloses a micro-controller performs the comparison. The micro-controller may or may not generate a flag signal in response to the comparison

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depending upon whether an operational parameter is above, below a flag level or outside or inside of a range of flag levels stored in the flag level registers (col. 9, line 4-29, col. 4, line 64 to col. 5, line 31).

He does not specifically disclose for determining whether an output threshold has been exceeded during the at least one monitoring window.

Mizutani discloses for determining whether an output threshold has been exceeded during the at least one monitoring window (see abstract).

At the time of the invention was made, it would have been obvious to a skill in the art to implement the teaching of Mizutani in the apparatus of Chiang that is determine whether an output threshold has been exceeded during the at least one monitoring window.

One of ordinary skill in the art would have been motivated to do that in order to enhance the detection of the equipment failures in the PON and improve the controlling of the data flow among the OLT and ONT.

Regarding claim 2, Chiang et al. discloses wherein reading the register comprises a plurality of successive readings, each to determine if the suspect rogue flag has been set (col. 9, line 4-19, col. 4, line 64 to col. 5, line 31).

Regarding claim 3, Mizutani discloses wherein the at least one monitoring window comprises a plurality of monitoring windows (see abstract).

Regarding claim 4, Chiang et al. discloses wherein setting the suspect rogue flag comprises removing the suspect rogue flag from the register if it determined that the

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output threshold was not exceeded in a monitoring window occurring after the suspect rogue flag has been set (col. 9, line 4-19, col. 4, line 64 to col. 5, line 31).

Regarding claims 5-6 and 16, Chiang et al. discloses determining whether to disable the optical transmitter and generating a command to disable the optical transmitter (col. 4, line 7 to line 29).

Regarding claim 7, Mizutani discloses wherein the optical network component is an ONT in a PON (see Figure 1).

Regarding claims 8-9, Mizutani discloses for attempting to transmit a PON status request message from the ONT to an OLT prior to determining whether to disable the optical transmitter and determining not to disable the optical transmitter if a reply to the status request message is received from the OLT indicating that the PON is functioning satisfactorily (paragraphs 0106- 0111).

Regarding claim 10, Chiang and Mizutani discloses for generating a command to disable the optical transmitter if no response is received from the OLT within a predetermined period of time (paragraphs 0106- 0111).

Regarding claims 13-14, 18 and 19, Chiang et al. discloses wherein the optical transmitter comprises a laser and the selected optical transmitter output indicator is the LBC and wherein the optical transmitter comprises a monitor photodiode and the selected transmitter output indicator is the MPC (col. 9, line 64 to col. 10, line 23; col. 10, lines 52-61).

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3. Claims 11-12 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Nagai et al. U.S. Publication no. 2005/0154936. Information processing equipment and data transfer method

b. Fukao et al. U.S. Publication no. 2010/0150578. Optical transmission device

c. Alwan et al. U.S. Publication no. 2003/0066947. Attenuation and calibration system and method

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dzung D Tran whose telephone number is (571) 272-3025. The examiner can normally be reached on 9:00 AM - 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vanderpuye Kenneth, can be reached on (571) 272-3078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Art Unit: 2613

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DT

11/05/2011

/Dzung D Tran/

Primary Examiner, Art Unit 2613

Notice of References Cited	Application/Control No. 12/649,606	Applicant(s)/Patent Under Reexamination SMITH ET AL.	
	Examiner DZUNG TRAN	Art Unit 2613	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-7,215,891	05-2007	Chiang et al.	398/137
*	B	US-2010/0067901	03-2010	Mizutani et al.	398/20
*	C	US-2005/0154936	07-2005	Nagai et al.	714/005
*	D	US-2010/0150578	06-2010	Fukao et al.	398/192
*	E	US-2003/0066947	04-2003	Alwan et al.	250/206
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Doc code: IDS

PTO/SB/08a (01-10)

Doc description: Information Disclosure Statement (IDS) Filed

Approved for use through 07/31/2012. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		12649606
	Filing Date		2009-12-30
	First Named Inventor	Joseph L. Smith	
	Art Unit	2613	
	Examiner Name		
	Attorney Docket Number	805792-US-NP	

U.S.PATENTS						
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1					

If you wish to add additional U.S. Patent citation information please click the Add button.

U.S.PATENT APPLICATION PUBLICATIONS						
Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
/D.T./	1	20090123154	A1		Dalton et al.	

If you wish to add additional U.S. Published Application citation information please click the Add button.

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.		

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	12649606
Filing Date	2009-12-30
First Named Inventor	Joseph L. Smith
Art Unit	2613
Examiner Name	
Attorney Docket Number	805792-US-NP

1		<input type="checkbox"/>
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EXAMINER SIGNATURE

Examiner Signature	/Dzung Tran/	Date Considered	11/04/2011
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

EAST Search History**EAST Search History (Prior Art)**


Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1141	398/1-2.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/06 10:46
L2	283	398/17.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/06 10:47
L3	533	398/33.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/06 10:47
L4	632	398/58.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/06 10:47
L5	471	398/70-71.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/06 10:48
L6	1	1 and (((rogue bad fail\$3 good pass) near3 flag) with (register memory stor\$3)) and optical and monitor\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/06 10:48
L7	1	2 and (((rogue bad fail\$3 good pass) near3 flag) with (register memory stor\$3)) and optical and monitor\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/06 10:49
L8	1	3 and (((rogue bad fail\$3 good pass) near3 flag) with (register memory stor\$3)) and optical and monitor\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/06 10:49
L9	0	4 and (((rogue bad fail\$3 good pass) near3 flag) with (register memory stor\$3)) and optical and monitor\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/06 10:49
S1	1	12/649606	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/10/28 12:20
S2	1273	(joseph near2 smith).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/10/28 12:50
S3	1	(joseph near2 smith).in. and (rogue with register)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/10/28 12:51

S4	1	(david near2 eckard).in. and (rogue with register)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/10/28 12:52
S5	7	memory same (rogue with register)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/01 10:22
S6	765	((rogue bad fail\$3) near2 flag with (register memory))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/01 10:35
S7	230	((rogue bad fail\$3) near2 flag with (register memory)) and threshold\$1	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/01 10:35
S8	42	((rogue bad fail\$3) near2 flag with (register memory)) and threshold\$1 and optical	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/01 10:36
S9	39	((rogue bad fail\$3) near2 flag with (register memory)) and threshold\$1 and optical and monitor\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/01 10:56
S10	7	((rogue bad fail\$3) near3 flag near2 set) with (register memory)) and threshold\$1 and optical and monitor\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/01 11:26
S11	2	"20090123154"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/04 13:02
S12	1	((rogue bad fail\$3) near2 flag with (register memory)) and "olt" and (onu ont)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/04 13:21
S13	19	((rogue bad fail\$3) near3 flag near2 set) with (register memory)) and optical and monitor\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/04 13:22
S14	20	((rogue bad fail\$3 good pass) near3 flag near2 set) with (register memory)) and optical and monitor\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/04 13:23
S15	56	((rogue bad fail\$3 good pass) near3 flag near2 set) with (register memory stor\$3)) and optical and monitor\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/04 13:24
S16	2	"20070237523"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/04 14:06
S17	2	"20100066901"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/11/06 08:52
S18	2	"20100067901"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	OR	OFF	2011/11/06 08:52

				IBM_TDB				
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11/ 6/ 2011 10:49:54 AM

C:\Users\dtran6\Documents\EAST\Workspaces\12649606.wsp


Search Notes 	Application/Control No. 12649606	Applicant(s)/Patent Under Reexamination SMITH ET AL.
	Examiner DZUNG TRAN	Art Unit 2613

SEARCHED			
Class	Subclass	Date	Examiner
398	1-2, 17, 33, 58, 70-71	11/05/2011	TD

SEARCH NOTES		
Search Notes	Date	Examiner
398/class as listed (USPAT; US-PGPUB; EPO; JPO and text search).See search history rintoutp	11/05/2011	TD

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner

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<i>Index of Claims</i> 	Application/Control No. 12649606	Applicant(s)/Patent Under Reexamination SMITH ET AL.
	Examiner DZUNG TRAN	Art Unit 2613

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

<input type="checkbox"/> Claims renumbered in the same order as presented by applicant		<input type="checkbox"/> CPA		<input type="checkbox"/> T.D.		<input type="checkbox"/> R.1.47			
CLAIM		DATE							
Final	Original	11/06/2011							
	1	✓							
	2	✓							
	3	✓							
	4	✓							
	5	✓							
	6	✓							
	7	✓							
	8	✓							
	9	✓							
	10	✓							
	11	O							
	12	O							
	13	✓							
	14	✓							
	15	✓							
	16	✓							
	17	O							
	18	✓							
	19	✓							
	20	✓							



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BIB DATA SHEET

CONFIRMATION NO. 5836

SERIAL NUMBER 12/649,606	FILING or 371(c) DATE 12/30/2009 RULE	CLASS 398	GROUP ART UNIT 2613	ATTORNEY DOCKET NO. 805792-US-NP		
APPLICANTS Joseph L. Smith, Fuquay Varina, NC; David G. Eckard, Knightdale, NC; ** CONTINUING DATA ***** This appln claims benefit of 61/273,702 08/07/2009 ** FOREIGN APPLICATIONS ***** ** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** 01/14/2010						
Foreign Priority claimed <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 35 USC 119(a-d) conditions met <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Verified and Acknowledged <u>/DZUNG D TRAN/</u> Examiner's Signature		<input type="checkbox"/> Met after Allowance Initials	STATE OR COUNTRY NC	SHEETS DRAWINGS 4	TOTAL CLAIMS 20	INDEPENDENT CLAIMS 3
ADDRESS Docket Administrator - Room 3D-201E Alcatel-Lucent USA Inc. 600-700 Mountain Avenue Murray Hill, NJ 07974 UNITED STATES						
TITLE Method and Appartus for Regulating Rogue Behavior in Optical Network Transmission Devices						
FILING FEE RECEIVED 1220	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:		<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees (Filing) <input type="checkbox"/> 1.17 Fees (Processing Ext. of time) <input type="checkbox"/> 1.18 Fees (Issue) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit			

Doc code: IDS

PTO/SB/08a (01-10)

Doc description: Information Disclosure Statement (IDS) Filed

Approved for use through 07/31/2012. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		12649606
	Filing Date		2009-12-30
	First Named Inventor	Joseph L. Smith	
	Art Unit	2613	
	Examiner Name		
	Attorney Docket Number	805792-US-NP	

U.S.PATENTS						
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1					

If you wish to add additional U.S. Patent citation information please click the Add button.

U.S.PATENT APPLICATION PUBLICATIONS						
Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20090123154	A1		Dalton et al.	

If you wish to add additional U.S. Published Application citation information please click the Add button.

FOREIGN PATENT DOCUMENTS								
Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ² i	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T ⁵
	1							<input type="checkbox"/>

If you wish to add additional Foreign Patent Document citation information please click the Add button

NON-PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	12649606
Filing Date	2009-12-30
First Named Inventor	Joseph L. Smith
Art Unit	2613
Examiner Name	
Attorney Docket Number	805792-US-NP

1		<input type="checkbox"/>
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EXAMINER SIGNATURE

Examiner Signature		Date Considered	
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	12649606
Filing Date	2009-12-30
First Named Inventor	Joseph L. Smith
Art Unit	2613
Examiner Name	
Attorney Docket Number	805792-US-NP

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☐ See attached certification statement.

☒ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Stephen J. Wyse/	Date (YYYY-MM-DD)	2011-03-01
Name/Print	Stephen J. Wyse	Registration Number	40880

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
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Electronic Patent Application Fee Transmittal

Application Number:	12649606			
Filing Date:	30-Dec-2009			
Title of Invention:	Method and Appartus for Regulating Rogue Behavior in Optical Network Transmission Devices			
First Named Inventor/Applicant Name:	Joseph L. Smith			
Filer:	Stephen Wyse/Joan Shields Mooneyham			
Attorney Docket Number:	805792-US-NP			
Filed as Large Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Submission- Information Disclosure Stmt	1806	1	180	180
Total in USD (\$)				180

Electronic Acknowledgement Receipt

EFS ID:	9558539
Application Number:	12649606
International Application Number:	
Confirmation Number:	5836
Title of Invention:	Method and Appartus for Regulating Rogue Behavior in Optical Network Transmission Devices
First Named Inventor/Applicant Name:	Joseph L. Smith
Customer Number:	22046
Filer:	Stephen Wyse/Joan Shields Mooneyham
Filer Authorized By:	Stephen Wyse
Attorney Docket Number:	805792-US-NP
Receipt Date:	01-MAR-2011
Filing Date:	30-DEC-2009
Time Stamp:	12:47:51
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$ 180
RAM confirmation Number	12530
Deposit Account	122325
Authorized User	

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Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	805792_IDS_Transmittal_01-Mar-2011_c.pdf	401177 5e1da9b38d56d953bb42b42edf0f140b02d8f472	no	2

Warnings:**Information:**

2	Fee Worksheet (PTO-875)	805792_Fee_Worksheet_01-Mar-2011_c.pdf	443809 d67316c1df9ff62771d2774784aab15650244731	no	2
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Warnings:**Information:**

3	Information Disclosure Statement (IDS) Filed (SB/08)	805792_IDS_01-Mar-2011_c.pdf	706709 41be713023ea08bc1b6a12ba626fa3d4bbcc55f16	no	4
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4	Fee Worksheet (PTO-875)	fee-info.pdf	30681 38fb61bd84980843d6c63763a0aaa534aff26620	no	2
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Warnings:**Information:**

Total Files Size (in bytes):	1582376
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TRANSMITTAL FORM <i>(to be used for all correspondence after initial filing)</i>	Application Number	12/649606	
	Filing Date	12/30/09	
	First Named Inventor	Joseph L. Smith	
	Art Unit	2613	
	Examiner Name		
Total Number of Pages in This Submission	5	Attorney Docket Number	805792-US-NP

ENCLOSURES (Check all that apply)		
<input checked="" type="checkbox"/> Fee Transmittal Form <input checked="" type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment/Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input checked="" type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Reply to Missing Parts/ Incomplete Application <input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____ <input type="checkbox"/> Landscape Table on CD	<input type="checkbox"/> After Allowance Communication to TC <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input type="checkbox"/> Other Enclosure(s) (please identify below):
Remarks <input type="text"/>		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT			
Firm Name			
Signature	/Stephen J. Wyse/		
Printed name	Stephen J. Wyse		
Date	03/01/2011	Reg. No.	40,880

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Signature	/Joan Shields Mooneyham/ (Filed electronically)		
Typed or printed name	Joan Shields Mooneyham	Date	03/01/2011

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2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
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6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
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Effective on 12/08/2004. Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818). <h2 style="margin: 0;">FEE TRANSMITTAL</h2> <h3 style="margin: 0;">For FY 2009</h3>		Complete if Known	
<input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27		Application Number	12/649606
		Filing Date	12/30/09
		First Named Inventor	Joseph L. Smith
		Examiner Name	
		Art Unit	2613
TOTAL AMOUNT OF PAYMENT (\$) 180.00		Attorney Docket No.	805792-US-NP

METHOD OF PAYMENT (check all that apply)							
<input type="checkbox"/> Check <input type="checkbox"/> Credit Card <input type="checkbox"/> Money Order <input type="checkbox"/> None <input type="checkbox"/> Other (please identify): _____							
<input checked="" type="checkbox"/> Deposit Account Deposit Account Number: <u>12-2325</u> Deposit Account Name: <u>Lucent Technologies Inc.</u>							
For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)							
<input checked="" type="checkbox"/> Charge fee(s) indicated below <input type="checkbox"/> Charge fee(s) indicated below, except for the filing fee							
<input checked="" type="checkbox"/> Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 <input checked="" type="checkbox"/> Credit any overpayments							
WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.							
FEE CALCULATION							
1. BASIC FILING, SEARCH, AND EXAMINATION FEES							
FILING FEES	SEARCH FEES	EXAMINATION FEES					
<u>Small Entity</u>	<u>Small Entity</u>	<u>Small Entity</u>					
<u>Fee (\$)</u>	<u>Fee (\$)</u>	<u>Fee (\$)</u>	<u>Fee (\$)</u>	<u>Fee (\$)</u>	<u>Fee (\$)</u>	<u>Fees Paid (\$)</u>	
Utility	330	165	540	270	220	110	_____
Design	220	110	100	50	140	70	_____
Plant	220	110	330	165	170	85	_____
Reissue	330	165	540	270	650	325	_____
Provisional	220	110	0	0	0	0	_____
2. EXCESS CLAIM FEES							
<u>Fee Description</u>	<u>Fee (\$)</u>	<u>Small Entity Fee (\$)</u>					
Each claim over 20 (including Reissues)	52	26					
Each independent claim over 3 (including Reissues)	220	110					
Multiple dependent claims	390	195					
<u>Total Claims</u>	<u>Extra Claims</u>	<u>Fee (\$)</u>	<u>Fee Paid (\$)</u>	<u>Multiple Dependent Claims</u>			
_____ - 20 or HP = _____	x	_____	=	_____	<u>Fee (\$)</u>	<u>Fee Paid (\$)</u>	_____
HP = highest number of total claims paid for, if greater than 20.							
<u>Indep. Claims</u>	<u>Extra Claims</u>	<u>Fee (\$)</u>	<u>Fee Paid (\$)</u>				
_____ - 3 or HP = _____	x	_____	=	_____			
HP = highest number of independent claims paid for, if greater than 3.							
3. APPLICATION SIZE FEE							
If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$270 (\$135 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).							
<u>Total Sheets</u>	<u>Extra Sheets</u>	<u>Number of each additional 50 or fraction thereof</u>	<u>Fee (\$)</u>	<u>Fee Paid (\$)</u>			
_____ - 100 = _____	/ 50 = _____	(round up to a whole number) x _____	=	_____			
4. OTHER FEE(S)							
Non-English Specification, \$130 fee (no small entity discount)				<u>Fees Paid (\$)</u>			
Other (e.g., late filing surcharge): Information Disclosure Statement				180.00			

SUBMITTED BY			
Signature	/Stephen J. Wyse/	Registration No. (Attorney/Agent) 40,880	Telephone 972-477-1497
Name (Print/Type)	Stephen J. Wyse	Date 03/01/2011	

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
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 Alexandria, Virginia 22313-1450
 www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/649,606	12/30/2009	Joseph L. Smith	805792-US-NP

CONFIRMATION NO. 5836

PUBLICATION NOTICE



OC000000045935319

22046
 Docket Administrator - Room 3D-201E
 Alcatel-Lucent USA Inc.
 600-700 Mountain Avenue
 Murray Hill, NJ 07974

Title:Method and Appartus for Regulating Rogue Behavior in Optical Network Transmission Devices

Publication No.US-2011-0033180-A1

Publication Date:02/10/2011

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently <http://www.uspto.gov/patft/>.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Office of Public Records. The Office of Public Records can be reached by telephone at (703) 308-9726 or (800) 972-6382, by facsimile at (703) 305-8759, by mail addressed to the United States Patent and Trademark Office, Office of Public Records, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently <http://pair.uspto.gov/>. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
12/649,606	12/30/2009	2613	1220	805792-US-NP	20	3

CONFIRMATION NO. 5836

UPDATED FILING RECEIPT



OC000000040185990

22046

Docket Administrator - Room 3D-201E
 Alcatel-Lucent USA Inc.
 600-700 Mountain Avenue
 Murray Hill, NJ 07974

Date Mailed: 02/22/2010

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Applicant(s)

Joseph L. Smith, Fuquay Varina, NC;
 David G. Eckard, Knightdale, NC;

Assignment For Published Patent Application

Alcatel-Lucent USA Inc., Murray Hill, NJ

Power of Attorney: The patent practitioners associated with Customer Number 22046

Domestic Priority data as claimed by applicant

This appln claims benefit of 61/273,702 08/07/2009

Foreign Applications

If Required, Foreign Filing License Granted: 01/14/2010

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 12/649,606**

Projected Publication Date: 02/10/2011

Non-Publication Request: No

Early Publication Request: No

Title

Method and Appartus for Regulating Rogue Behavior in Optical Network Transmission Devices

Preliminary Class

398

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Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

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**TRANSMITTAL
FORM**

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

Application Number	12/649,606
Filing Date	12/30/2009
First Named Inventor	Joseph L. Smith
Art Unit	2613
Examiner Name	
Attorney Docket Number	805792-US-NP

ENCLOSURES (Check all that apply)

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|--|---|---|
| <input checked="" type="checkbox"/> Fee Transmittal Form
<input checked="" type="checkbox"/> Fee Attached
<input type="checkbox"/> Amendment/Reply
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<input type="checkbox"/> Affidavits/declaration(s)
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<input checked="" type="checkbox"/> Reply to Missing Parts/
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Remarks

Declaration and Power of Attorney
Formal Drawings**SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT**

Firm Name			
Signature	/Stephen J. Wyse/		
Printed name	Stephen J. Wyse		
Date	02/09/2010	Reg. No.	40,880

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

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Typed or printed name	Joan Shields Mooneyham	Date	02/09/2010

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PATENT AND TRADEMARK OFFICE**

Declaration and Power of Attorney

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am an original, first and joint inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled **Method and Apparatus for Regulating Rogue Behavior in Optical Network Transmission Devices** the specification of which

☒ is attached hereto

OR

☐ was filed on _____ as Application Serial Number _____.

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by an amendment, if any, specifically referred to in this oath or declaration.

I acknowledge the duty to disclose all information known to me which is material to patentability as defined in Title 37, Code of Federal Regulations, 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, 119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

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I hereby claim the benefit under Title 35, United States Code, 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, 112, I acknowledge the duty to disclose all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application:

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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States

Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

I hereby appoint Practitioners associated with Customer Number:

22046

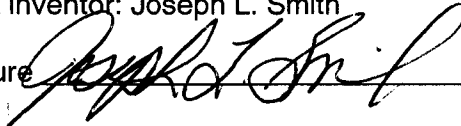
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Full name of 1st joint inventor: Joseph L. Smith

Inventor's signature



Date

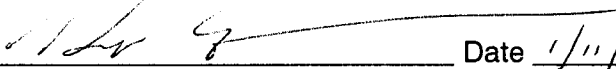
1/7/2010

Residence: Fuquay Varina, North Carolina

Citizenship: United States of America :

Post Office Address: 5516 Linkside Court
Fuquay Varina, NC 27526

Full name of 2nd joint inventor: David G. Eckard

Inventor's signature  Date 1/11/09

Residence: Knightdale, North Carolina

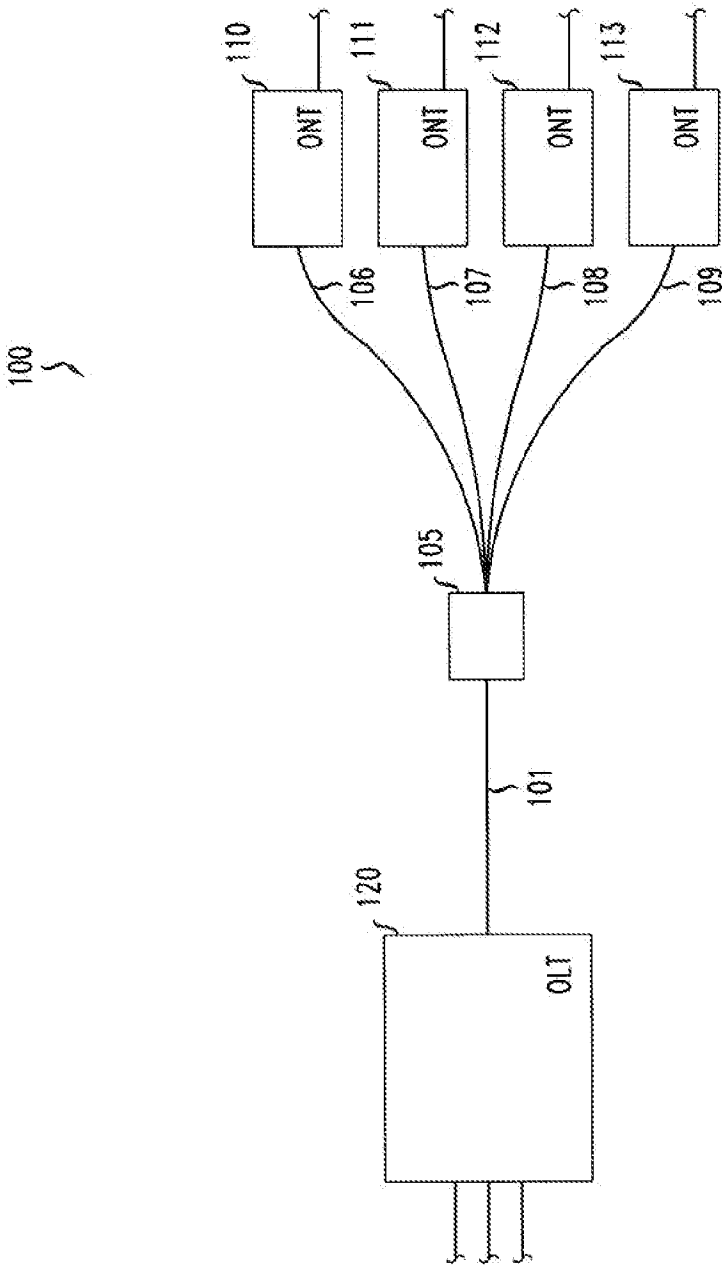
Citizenship: United States of America :

Post Office Address: 1018 Delta River Way
Knightdale, NC 27545

805792

1/4

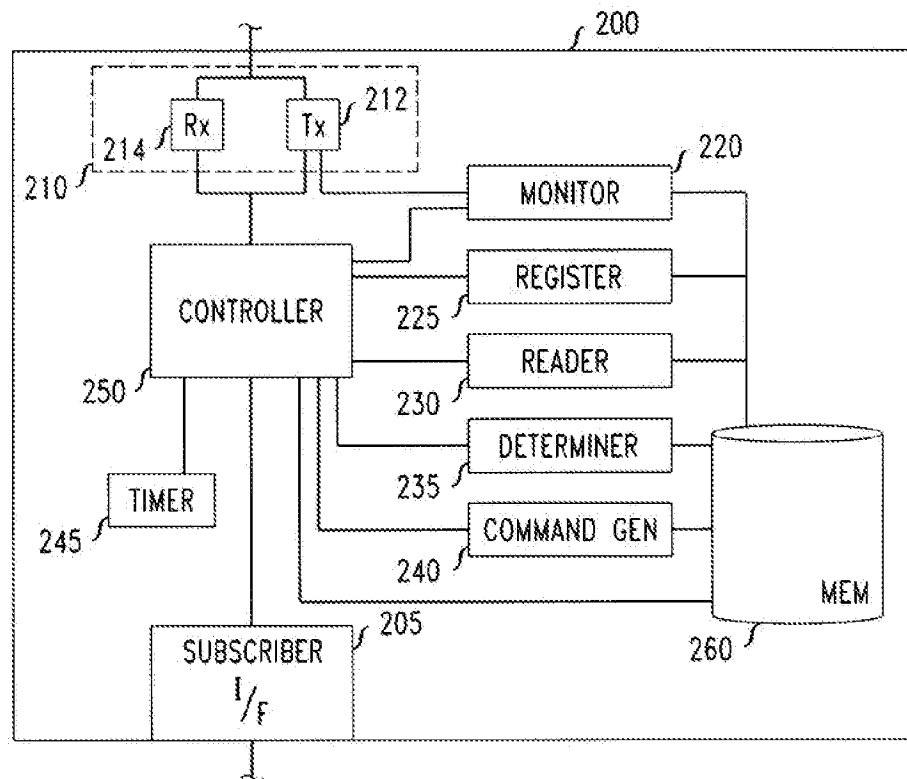
FIG. 1



805792

2/4

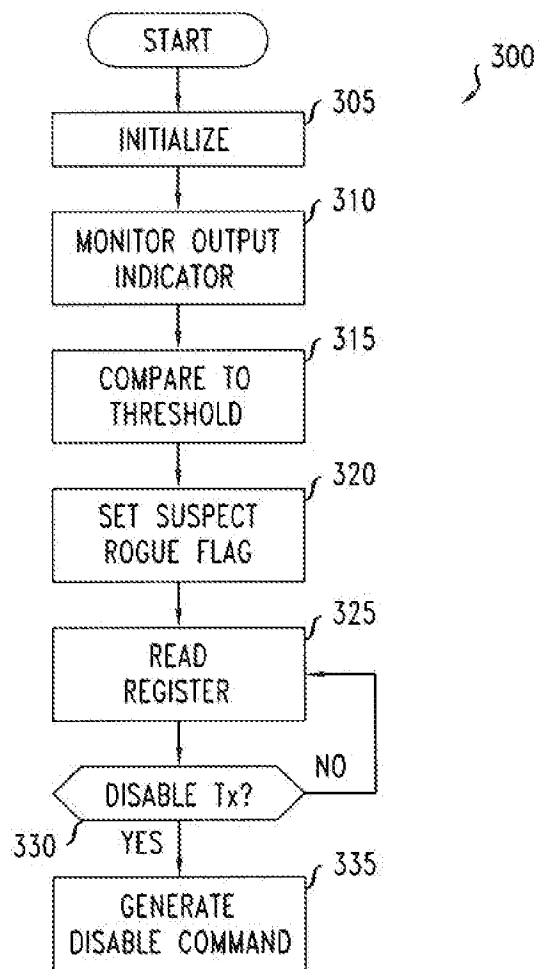
FIG. 2



805792

3/4

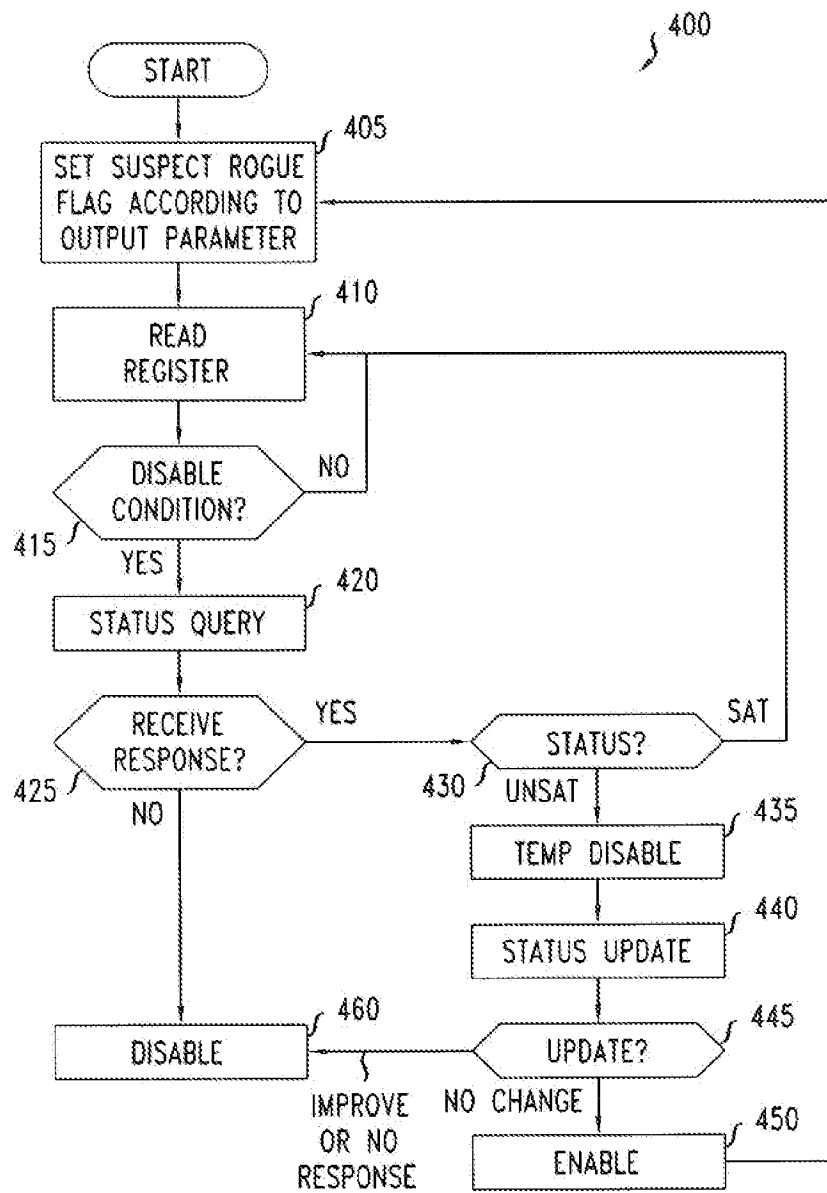
FIG. 3



805792

4/4

FIG. 4



Electronic Patent Application Fee Transmittal

Application Number:	12649606			
Filing Date:	30-Dec-2009			
Title of Invention:	Method and Appartus for Regulating Rogue Behavior in Optical Network Transmission Devices			
First Named Inventor/Applicant Name:	Joseph L. Smith			
Filer:	Stephen Wyse/Joan Shields Mooneyham			
Attorney Docket Number:	805792			
Filed as Large Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Late filing fee for oath or declaration	1051	1	130	130
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Total in USD (\$)				130

Electronic Acknowledgement Receipt

EFS ID:	6976964
Application Number:	12649606
International Application Number:	
Confirmation Number:	5836
Title of Invention:	Method and Appartus for Regulating Rogue Behavior in Optical Network Transmission Devices
First Named Inventor/Applicant Name:	Joseph L. Smith
Customer Number:	22046
Filer:	Stephen Wyse/Joan Shields Mooneyham
Filer Authorized By:	Stephen Wyse
Attorney Docket Number:	805792
Receipt Date:	09-FEB-2010
Filing Date:	30-DEC-2009
Time Stamp:	14:12:49
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$ 130
RAM confirmation Number	328
Deposit Account	122325
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	805792-US_Transmittal_Form.pdf	63069 f5bae4519f3cfd4660cb2f5a030e1a147f9eb8cd	no	2
Warnings:					
Information:					
2	Oath or Declaration filed	805792-US_Declaration_and_Oath_Signed.pdf	87330 56091ef06032820e7d8e00f807cdabb676a350904	no	3
Warnings:					
Information:					
3	Drawings-only black and white line drawings	805792-US_Formal_Drawings.pdf	772204 87abe0d2cc6d1bb37bdc82432f8e92912bec5b0cd	no	4
Warnings:					
Information:					
4	Fee Worksheet (PTO-875)	fee-info.pdf	30280 acc422f7104382b31699f5a2769782e042338fb5	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			952883		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
12/649,606	12/30/2009	2613	1090	805792	20	3

CONFIRMATION NO. 5836

22046

Docket Administrator - Room 3D-201E
 Alcatel-Lucent USA Inc.
 600-700 Mountain Avenue
 Murray Hill, NJ 07974

FILING RECEIPT



OC000000039667271

Date Mailed: 01/19/2010

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Applicant(s)

Joseph L. Smith, Fuquay Varina, NC;
 David G. Eckard, Knightdale, NC;

Assignment For Published Patent Application

Alcatel-Lucent USA Inc., Murray Hill, NJ

Power of Attorney: None**Domestic Priority data as claimed by applicant**

This appln claims benefit of 61/273,702 08/07/2009

Foreign Applications

If Required, Foreign Filing License Granted: 01/14/2010

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 12/649,606**

Projected Publication Date: To Be Determined - pending completion of Missing Parts

Non-Publication Request: No

Early Publication Request: No

Title

Method and Appartus for Regulating Rogue Behavior in Optical Network Transmission Devices

Preliminary Class

398

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

LICENSE FOR FOREIGN FILING UNDER**Title 35, United States Code, Section 184****Title 37, Code of Federal Regulations, 5.11 & 5.15****GRANTED**

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as

set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).



UNITED STATES PATENT AND TRADEMARK OFFICE

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 www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/649,606	12/30/2009	Joseph L. Smith	805792

CONFIRMATION NO. 5836

FORMALITIES LETTER



OC000000039667272

22046
 Docket Administrator - Room 3D-201E
 Alcatel-Lucent USA Inc.
 600-700 Mountain Avenue
 Murray Hill, NJ 07974

Date Mailed: 01/19/2010

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

*Filing Date Granted***Items Required To Avoid Abandonment:**

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items and pay any fees required below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The oath or declaration is missing.

A properly signed oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Application Number and Filing Date, is required.

Note: If a petition under 37 CFR 1.47 is being filed, an oath or declaration in compliance with 37 CFR 1.63 signed by all available joint inventors, or if no inventor is available by a party with sufficient proprietary interest, is required.

The applicant needs to satisfy supplemental fees problems indicated below.

The required item(s) identified below must be timely submitted to avoid abandonment:

- To avoid abandonment, a surcharge (for late submission of filing fee, search fee, examination fee or oath or declaration) as set forth in 37 CFR 1.16(f) of \$130 for a non-small entity, must be submitted with the missing items identified in this notice.

SUMMARY OF FEES DUE:

Total additional fee(s) required for this application is \$130 for a non-small entity

- \$130 Surcharge.

Replies should be mailed to:

Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Registered users of EFS-Web may alternatively submit their reply to this notice via EFS-Web.
<https://sportal.uspto.gov/authenticate/AuthenticateUserLocalEPF.html>

For more information about EFS-Web please call the USPTO Electronic Business Center at **1-866-217-9197** or visit our website at <http://www.uspto.gov/ebs>.

If you are not using EFS-Web to submit your reply, you must include a copy of this notice.

/zabaha/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

PTO/SB/05 (08-08)

Approved for use through 06/30/2010. OMB 0651-0032
U.S. Patent and Trademark Office. U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No.

805792

First Inventor

Joseph L. Smith

Title

Method and Apparatus for Regulat...

Express Mail Label No.

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

1. ☒ **Fee Transmittal Form** (e.g., PTO/SB/17)
2. ☐ **Applicant claims small entity status.**
See 37 CFR 1.27.
3. ☒ **Specification** [Total Pages 23]
Both the claims and abstract must start on a new page
(For information on the preferred arrangement, see MPEP 608.01(a))
4. ☒ **Drawing(s)** (35 U.S.C. 113) [Total Sheets 4]
5. **Oath or Declaration** [Total Sheets]
 - a. ☐ Newly executed (original or copy)
 - b. ☐ A copy from a prior application (37 CFR 1.63(d))
(for continuation/divisional with Box 18 completed)
 - i. ☐ **DELETION OF INVENTOR(S)**
Signed statement attached deleting inventor(s)
name in the prior application, see 37 CFR
1.63(d)(2) and 1.33(b).
6. ☒ **Application Data Sheet.** See 37 CFR 1.76
7. ☐ **CD-ROM or CD-R** in duplicate, large table or
Computer Program (Appendix)
☐ Landscape Table on CD
8. **Nucleotide and/or Amino Acid Sequence Submission**
(if applicable, items a. – c. are required)
 - a. ☐ Computer Readable Form (CRF)
 - b. **Specification Sequence Listing on:**
 - i. ☐ CD-ROM or CD-R (2 copies); or
 - ii. ☐ Paper
 - c. ☐ Statements verifying identity of above copies

ADDRESS TO:

Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450
ACCOMPANYING APPLICATION PARTS

9. ☐ **Assignment Papers** (cover sheet & document(s))
Name of Assignee _____
10. ☐ **37 CFR 3.73(b) Statement** ☐ **Power of Attorney**
(when there is an assignee)
11. ☐ **English Translation Document** (if applicable)
12. ☐ **Information Disclosure Statement** (PTO/SB/08 or PTO-1449)
☐ Copies of citations attached
13. ☐ **Preliminary Amendment**
14. ☐ **Return Receipt Postcard** (MPEP 503)
(Should be specifically itemized)
15. ☐ **Certified Copy of Priority Document(s)**
(if foreign priority is claimed)
16. ☐ **Nonpublication Request** under 35 U.S.C. 122(b)(2)(B)(i).
Applicant must attach form PTO/SB/35 or equivalent.
17. ☐ Other: _____

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in the first sentence of the specification following the title, or in an Application Data Sheet under 37 CFR 1.76:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.: _____

Prior application information: Examiner _____ Art Unit: _____

19. CORRESPONDENCE ADDRESS
☒ The address associated with Customer Number: 22046 OR ☐ Correspondence address below

Name

Address

City

State

Zip Code

Country

Telephone

Email

Signature

/Stephen J. Wyse/

Date

2009-12-30

Name

(Print/Type)

Stephen J. Wyse

Registration No.

(Attorney/Agent)

40,880

This collection of information is required by 37 CFR 1.53(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

PTO/SB/05 (08-08)

Approved for use through 06/30/2010. OMB 0651-0032
U.S. Patent and Trademark Office. U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No.

805792

First Inventor

Joseph L. Smith

Title

Method and Apparatus for Regulat...

Express Mail Label No.

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

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See 37 CFR 1.27.
3. ☒ **Specification** [Total Pages 23]
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4. ☒ **Drawing(s)** (35 U.S.C. 113) [Total Sheets 4]
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 - a. ☐ Newly executed (original or copy)
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(for continuation/divisional with Box 18 completed)
 - i. ☐ **DELETION OF INVENTOR(S)**
Signed statement attached deleting inventor(s)
name in the prior application, see 37 CFR
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7. ☐ **CD-ROM or CD-R** in duplicate, large table or
Computer Program (Appendix)
☐ Landscape Table on CD
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(if applicable, items a. – c. are required)
 - a. ☐ Computer Readable Form (CRF)
 - b. **Specification Sequence Listing on:**
 - i. ☐ CD-ROM or CD-R (2 copies); or
 - ii. ☐ Paper
 - c. ☐ Statements verifying identity of above copies

ADDRESS TO:

Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450
ACCOMPANYING APPLICATION PARTS

9. ☐ **Assignment Papers** (cover sheet & document(s))
Name of Assignee _____
10. ☐ **37 CFR 3.73(b) Statement** ☐ **Power of Attorney**
(when there is an assignee)
11. ☐ **English Translation Document** (if applicable)
12. ☐ **Information Disclosure Statement** (PTO/SB/08 or PTO-1449)
☐ Copies of citations attached
13. ☐ **Preliminary Amendment**
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(Should be specifically itemized)
15. ☐ **Certified Copy of Priority Document(s)**
(if foreign priority is claimed)
16. ☐ **Nonpublication Request** under 35 U.S.C. 122(b)(2)(B)(i).
Applicant must attach form PTO/SB/35 or equivalent.
17. ☐ Other: _____

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in the first sentence of the specification following the title, or in an Application Data Sheet under 37 CFR 1.76:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.: _____

Prior application information: Examiner: _____ Art Unit: _____

19. CORRESPONDENCE ADDRESS
☒ The address associated with Customer Number: 22046 OR ☐ Correspondence address below

Name

Address

City

State

Zip Code

Country

Telephone

Email

Signature

/Stephen J. Wyse/

Date

2009-12-30

Name

(Print/Type)

Stephen J. Wyse

Registration No.

(Attorney/Agent)

40,880

This collection of information is required by 37 CFR 1.53(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	805792
		Application Number	
Title of Invention	Method and Apparatus for Regulating Rogue Behavior in Optical Network Transmission Devices		
<p>The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.</p> <p>This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.</p>			

Secrecy Order 37 CFR 5.2

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Applicant Authority		<input checked="" type="radio"/> Inventor		<input type="radio"/> Legal Representative under 35 U.S.C. 117	
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Prefix	Given Name	Middle Name	Family Name	Suffix	
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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	805792
		Application Number	
Title of Invention	Method and Apparatus for Regulating Rogue Behavior in Optical Network Transmission Devices		
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Application Information:

Title of the Invention	Method and Apparatus for Regulating Rogue Behavior in Optical Network Transmission Devices		
Attorney Docket Number	805792	Small Entity Status Claimed	<input type="checkbox"/>
Application Type	Nonprovisional		
Subject Matter	Utility		
Suggested Class (if any)		Sub Class (if any)	
Suggested Technology Center (if any)			
Total Number of Drawing Sheets (if any)	4	Suggested Figure for Publication (if any)	

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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	805792
		Application Number	
Title of Invention	Method and Apparatus for Regulating Rogue Behavior in Optical Network Transmission Devices		

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If the Assignee is an Organization check here. <input checked="" type="checkbox"/>			
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				40880

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METHOD AND APPARATUS FOR REGULATING ROGUE BEHAVIOR IN OPTICAL NETWORK TRANSMISSION DEVICES

CROSS-REFERENCE TO RELATED APPLICATIONS

5 The present disclosure is related to and claims priority from U.S. Provisional Patent Application Serial No. 61/273,702, entitled Method and Apparatus for Regulating Rogue Behavior in Optical Network Transmission Devices, filed on August 7, 2009, the entire contents of which are incorporated by reference herein.

10 TECHNICAL FIELD

 The present invention relates generally to the field of optical communication networks, and, more particularly, to a method and apparatus for detecting rogue behavior in a PON optical network component, such as an ONT, and, if necessary, shutting down or otherwise altering the behavior of the rogue component.

15

BACKGROUND

 The following abbreviations are herewith defined, at least some of which are referred to within the following description of the state-of-the-art and the present invention.

20	GPON	gigabit (enabled) PON
	I2C	inter-integrated circuit
	LBC	laser bias current
	LED	light emitting diode
	MDU	multi-dwelling unit
25	MPC	monitor photodiode current
	OLT	optical line termination
	ONT	optical network termination
	PON	passive optical network

An increasing number of communications systems use optical transmission for carrying signals to transmit information. Optical networks may be used for both voice and data transmission, such as telephone service and Internet access, as well as for the transmission of television programs and other media. Optical networks use light
5 produced by lasers or LEDs that is transmitted along fiber optic cables. Optical networks are high capacity and preferred in many applications. Although bundled fiber optic cables have for some time been used for high-capacity, long-distance transmissions, fiber to the home and fiber to the curb implementations are becoming more common as the infrastructure is built out.

10 A widely-used type of optical network is a PON. Herein, this term is meant to include the various evolutions of the PON, such as a GPON. In an exemplary PON, an OLT is connected by fiber optic cable to a number of ONTs. An OLT is frequently located in the network provider's switching office and may serve several dozen separate ONTs. The OLT receives information from content and service providers for
15 transmission to the subscribers through their respective ONTs. Although in most cases this downstream traffic accounts for the majority of system transmission, each ONT also transmits information upstream to the OLT, which then can process and forward it on to its intended destination.

Note that as used herein, "ONT" is intended to refer broadly to all subscriber-
20 based optical network components. Different ONTs may, for example, be associated with a particular residence, while others may be associated with apartment buildings and small businesses, and permit access for a number of separate subscribers. ONTs are typically demarcation points, terminating the provider's optical network at a subscriber's premises. From these ONTs, a connection is made to the subscriber's equipment, in
25 many cases through a home network to which multiple devices have access.

Because there is more downstream transmission bandwidth available, each ONT is assigned time slots for upstream transmission, during which buffered information, if any, is sent as a burst during an available slot. Scheduling is normally done by the OLT.

Time slots are tightly scheduled, however, to maximize the available transmission time. Precise calculations are made to ensure that each ONT transmits at the right time, including a process called ranging. In ranging, the PON goes through a procedure so that the OLT may discover each ONT to which it is actively connected, and gauge the physical distance separating it from the OLT. A delay associated with that distance is used to adjust the time slot for the respective ONT. As should be apparent, this timing is very important and ONTs that transmit at the wrong time may disrupt communications for the entire PON.

One problem encountered in this carefully-executed scenario is the rogue ONT. A rogue ONT is one that is currently over-transmitting, and therefore transmitting, at least part of the time, at the wrong times. This may occur, for example, because the optical transmitter in the ONT is stuck in an 'on' configuration, although a rogue ONT is not necessarily 'on' all of the time.

Although the remedy for a rogue ONT situation will often be to simply shut down the offending components, temporarily or until a repair or restart may be affected, there are often practical obstacles to doing so. First, the offending ONT must somehow be detected. The OLT will naturally be able to perceive in most cases that transmissions on the PON are not occurring normally. But since in this event a rogue ONT is likely transmitting at the wrong time, or disrupting the transmissions from the ONTs to the OLT, it may be difficult to identify the offending ONT. Therefore existing solutions that rely on communication between the OLT and one or more ONTs are often not satisfactory.

One possible scheme is to monitor the burst enable signal (related to the ONT's allocated timeslot) for an optical laser or other light source, but failures beyond this control point may leave the ONT open to additional faults that are not detectable in this manner. The monitoring of LBC is another possibility, but due to the burst nature of PON transmissions, the measurements taken in this case are in and of themselves less than satisfactory for detecting a rogue ONT.

Note that the techniques or schemes described herein as existing or possible are presented as background for the present invention, but no admission is made thereby that these techniques and schemes were heretofore commercialized or known to others besides the inventors.

5 Accordingly, there has been and still is a need to address the aforementioned shortcomings and other shortcomings associated with regulating rogue ONTs and other, similar, optical transmission components. These needs and other needs are satisfied by the present invention.

10

SUMMARY

The present invention is directed to a manner of regulating rogue behavior in optical transmission devices, preferably by the optical transmission device itself or at least in a way that minimizes the need for communications with other network components.

In one aspect, the present invention is a method of regulating rogue behavior in an optical network component having an optical transmitter. The method includes monitoring a selected optical transmitter output indicator during at least one monitoring window, determining whether an output threshold has been exceeded during the at least one monitoring window and, if so, setting a suspect rogue flag in a register. The method further includes reading the register to determine if the suspect rogue flag has been set. In a preferred embodiment, the method includes monitoring during a plurality of windows, setting the suspect rogue flag accordingly, and reading the register a plurality of times in succession. The method may further include determining whether to disable the optical transmitter based on the register reading or readings, and generating a command to disable the optical transmitter if required.

In a preferred embodiment, the optical network component is an ONT operational in a PON using a laser for the optical transmitter. In this preferred embodiment, the output indicator is preferably either the LBC or the MPC. The method may further include attempting to communicate with an OLT of the PON if a determination is made that a suspect rogue condition may exist. In this case, the ONT may send a network status request message to the OLT, and disable the optical transmitter if no reply is received or if the reply indicates network problems exist. In the latter case, the ONT may, after some time has passed with the optical transmitter disabled, send a network status update query in an attempt to determine if the network conditions improved during this time. The optical transmitter may remain enabled if network conditions did not change when the optical transmitter was disabled.

In another aspect, the present invention is an apparatus for regulating rogue behavior in an optical transmission device, including an output indicator monitor, a register for storing a suspect rogue flag if the output indicator monitor detects that an output indicator threshold has been exceeded during a monitoring window, a reader for
5 reading the register to determine whether a suspect rogue flag has been set, and a determiner for determining whether to disable the optical transmitter if a suspect rogue flag has been set.

In yet another aspect, the present invention is an ONT for use in a PON including a network interface comprising an optical transmitter and an optical receiver, a memory
10 device comprising a register, an output indicator monitor for monitoring at least one output indicator of the optical transmitter, a reader for reading the register to determine whether a suspect rogue flag has been set by the output indicator monitor, and a determiner for determining whether to disable the optical transmitter if a suspect rogue flag has been set.

15 Additional aspects of the invention will be set forth, in part, in the detailed description, figures and any claims which follow, and in part will be derived from the detailed description, or can be learned by practice of the invention. It is to be understood that both the foregoing general description and the following detailed description are exemplary and explanatory only and are not restrictive of the invention as disclosed.

BRIEF DESCRIPTION OF THE DRAWINGS

A more complete understanding of the present invention may be obtained by reference to the following detailed description when taken in conjunction with the accompanying drawings wherein:

5 Figure 1 is a schematic diagram illustrating selected components of a PON in which the present invention may be advantageously implemented;

 Figure 2 is a simplified block diagram illustrating selected components of an ONT according to an embodiment of the present invention;

10 Figure 3 is a flow diagram illustrating a method of regulating rogue behavior in an optical transmitter according to an embodiment of the present invention; and

 Figure 4 is a flow diagram illustrating a method of regulating rogue behavior in an optical transmitter according to another embodiment of the present invention.

DETAILED DESCRIPTION

The present invention is directed to a manner of regulating rogue behavior in optical transmission devices. Typically these devices are included in the components that are intended to function in an optical communication network. The rogue behavior must be controlled because it is often if not always disruptive to network communications. As mentioned above, rogue behavior occurs when the light source, such as a laser or LED, is on for a significant amount of the available time, especially when it is operating at a time not assigned to it. Regulation of this rogue behavior includes the ability to detect and disable the optical transmitter, either for a period of time or permanently – permanently in this context meaning until the ONT can be re-initialized, sometimes manually, and preferably after the cause of the rogue behavior has been eliminated.

The present invention will now be described in terms of detecting rogue behavior in an ONT operating within a PON. It should be recognized, however, that the present invention has applicability for use in other optical transmission devices and in other networks as well. Again, it is noted that herein the term “ONT” is meant to include all subscriber-based optical network components. The present invention is of particular advantage in PONs in part because of their widespread use. In addition the components in a PON are usually geographically widely-dispersed, and are often located on private property where they may be inconvenient to access. In these circumstances, regulation of a rogue ONT mostly or exclusively by the ONT itself is desirable

Figure 1 is a schematic diagram illustrating selected components of a PON 100 in which the present invention may be advantageously implemented. Note that PON 100 may, and in many implementations will, include additional components, and the configuration shown in Figure 1 is intended to be exemplary rather than limiting. Four ONTs, 110 through 113, are shown, although in a typical PON there may be many more or, in some cases, fewer. In this illustration, each of the ONTs are presumed to be located at and serving a different subscriber, perhaps at their respective residences. The

ONT at each location is connected or connectable to a device of the subscriber, or to a network of such devices (not shown).

PON 100 also includes an OLT 120, which communicates directly or indirectly with various sources of content and network-accessible services (not shown) that are of interest to the subscribers associated with ONTs 110 through 113. As should be apparent, OLT 120 handles the communications between these entities and the ONTs. OLT 120 may also be involved in regulating the PON and individual ONTs, although an object of the present invention is to leave much of this function in the respective ONTs themselves.

OLT 120 is in at least optical communication with each of the ONTs in the PON 100. In the embodiment of Figure 1, OLT is connected with the ONTs 110 through 113 via a fiber optic cable 101 and fiber optic cables 106 through 109. In this PON, a single splitter 105 is used to separate out from a transmitted signal and ensure that each ONT receives the same downstream signal. In other optical networks, it may also separate the different wavelengths, if used, associated with each of the respective ONTs. The splitter in a PON is typically a passive element requiring no power. Note, however, that no particular network configuration is a requirement of the present invention unless explicitly stated or apparent from the context. As alluded to above, since scheduled upstream traffic can also be accommodated in PON 100, rogue behavior by one or more of the ONTs can be disruptive. An ONT for regulating rogue behavior will now be described in more detail.

Figure 2 is a simplified block diagram illustrating selected components of an ONT 200 according to an embodiment of the present invention. In this embodiment, ONT 200 includes a subscriber interface 205 for communicating with a device or network (not shown) belonging to, for example, a residential homeowner. ONT 200 also has a network interface 210 for communicating with a network, for example PON 100 shown in Figure 1. In the embodiment of the Figure 2, network interface 210 includes a

transmitter 212 and receiver 214, for clarity shown separately, although they are often part of the same optics module.

5 The network interface 210 and subscriber interface operate under the control of controller 250, as does the memory device 260. Memory device 260 may be used for example, for storing operational instructions, identification information, and actual content that is being buffered.

10 In accordance with this embodiment of the present invention, ONT 200 also includes a monitor 220 for monitoring one or more output indicators of the transmitter 212. In this embodiment, the transmitter is presumed to include a laser, and an LBC is generated to assist in regulating its operation. Monitor 220 monitors the LBC, under the control of controller 250, for selected monitoring windows and, if the LBC indicates that the laser is 'on' for more than a predetermined percentage of the monitoring window duration, then controller 250 sets a suspect rogue flag in the register 225. Register 225 may store other information as well, and in a preferred embodiment it is the I2C register of ONT 200. Another output indicator that may be monitored is the MPC, with suspect rogue conditions flagged in register 225 in similar fashion. In some implementations more than one output indicator may be monitored, and the results of both used in setting suspect rogue flags, although this approach is not presently preferred.

20 Here it is noted that the other output indicator, if any, is something other than the burst enable signal itself, which may sometimes if not frequently be less successful when used in detecting rogue behavior. Note also that the term 'predetermined', as used herein, means that a threshold has been determined prior to the closing of a given window; this may be set in advance and seldom changed, or it may vary, that is, be re-determined, between one window and a later, subsequent window.

25 In the embodiment of Figure 2, ONT 200 also includes a reader 230 for reading register 225 and, specifically, for determining whether a suspect rogue flag has been set. In a preferred embodiment, reader 230 makes a number of successive readings on a periodic basis. The results of these readings are stored in memory 260 and used by

determiner 235. Determiner 235 uses the results of the readings to determine whether the optical transmitter 212 is exhibiting rogue behavior and should be disabled. Note that other factors besides the readings of the suspect rogue flag may be taken into account in making this determination, as described in more detail below. Command generator 240
5 generates a disable command when determiner 235 determines that the optical transmitter 212 should be disabled. In applicable embodiments, command generator 240 may also generate enable commands to enable optical transmitter 212, for example after a predetermined period of disability as determined by timer 245.

Note that these components of ONT 200 are shown separately for illustration; in
10 other implementations they may be combined together or further divided. Register 225, for example, may also be considered a part of the memory device 260. In most cases, however, it is preferred that they are all resident on ONT 200 to minimize communications with other, physically separate network components in order to perform the method associated with the present invention. This method will now be described in
15 more detail.

Figure 3 is a flow diagram illustrating a method 300 of regulating rogue behavior in an optical transmitter according to an embodiment of the present invention. As above, this description will be presented largely in terms of an ONT operating within a PON or similar optical network, although the method is applicable to other devices and networks
20 as well. At START, it is presumed that the components necessary to perform the method according to the present invention are available and operational. The process then begins when the ONT is initialized (step 305). This may simply signify powering up a network-connected device, but may also include any necessary startup routine that must be performed as a predicate to normal operation. In this embodiment, however,
25 initialization 305 precedes but does not include the PON discovery and ranging process.

Once the device is initialized, one or more transmitter output indicators are monitored (step 310). As mentioned above, this indicator may be either an LBC or an MPC, or in some cases some other output indicator. In some embodiments, both may be

used. Another output indicator may also be used instead, if is available, although using the LBC or MPC may be most available in existing types of devices and is presently preferred.

5 The monitoring 310 is performed for a specific time, which may be referred to as the monitoring window. The length of the monitoring window may vary from one implementation to another, and in some embodiments is set by the network operator, for example at device installation or remotely at the start of the discovery and ranging process. In other embodiments, the monitoring window is dynamically adjustable based on factors determined by the network operator. As an example, the monitoring window
10 may be somewhere between 500 μ s and 10 seconds, although other window durations outside this range may be used as well. Successive monitoring windows are usually to be of the same duration, unless adjusted, but in some cases different monitoring window sizes may by design be used in a series of monitoring operations.

15 In a preferred embodiment, the monitoring 310 is performed during ranging because then the amount of time that the light source is on is expected to be relatively small. Rogue behavior will be relatively easy to detect. Monitoring can also be performed at other times as well, however, as will be discussed in more detail below. In either case, the monitoring reveals, by tracking one or more of the output indicators, the time during the monitoring window that the light source is on. This can be expressed, for
20 example as a percentage of the total window duration.

When the window closes, this percentage is compared (step 315) to a set threshold value, for example 50%, to see if the threshold has been exceeded. Note that here, 50% is used as an example; in other embodiments, the threshold may be set to almost any value. In some embodiments, this value may be changed remotely or automatically
25 adjusted, or both. Note also that while the monitoring 310 and comparing 315 are for convenience represented as occurring once, in most implementations they will be repeated many times in succession. The ONT may but will not necessarily run this

process continuously, although the size and frequency of the monitoring window may be varied from time to time (not shown).

When the comparison 315 has been performed, a flag is set (step 320) accordingly. If the threshold is exceeded, at step 320 a flag is set indicating that rogue behavior is suspected. For convenience this will be referred to as a suspect rogue flag, and, in a preferred embodiment, the suspect rogue flag is set in the I2C register of the optics module of the ONT. In this embodiment, if the suspect rogue flag is set and a subsequent monitoring step measures a value that does not exceed the threshold value, the suspect rogue flag may be un-set, or removed at step 320. Note that this removal of the suspect rogue flag may not be permitted in all embodiments; in which case once the flag has been set it remains set. In this regard note also that some transmitter activity is expected in normal operation, but the suspect rogue flag indicates activity exceeding a threshold. Whether the suspect rogue flag is removed subsequent to being set may depend in part on the length chosen for the monitoring window and frequency of monitoring. It may also depend on whether the ONT is ranging or regular operation, or upon experience-related factors. In some embodiments, for example, the flag may be un-set only if a certain number of successive monitoring windows have found no value exceeding the threshold.

In the embodiment of Figure 3, the ONT reads the I2C register (step 325) periodically to see if the suspect rogue flag has been set. If so, the ONT determines (step 330) whether to disable the optical transmitter. This determination could be made, for example, simply if reading the I2C register reveals that the suspect rogue flag has been set. In a preferred embodiment, however, a number of successive reads are taken at step 320, and a disable determination made only after encountering a suspect rogue flag a certain number of times. In embodiments where the suspect rogue flag may be un-set under certain conditions, a certain number of successive reads may be required within in a predetermined time frame or number of reads.

As should be apparent, a network operator may want to adjust the monitoring window, suspect rogue flag setting threshold, and disable-determination criteria at the same time so that each value may take into consideration the others as well.

If a determination is made at step 325, then the ONT generates an optical transmitter disable command, for example by setting a disable flag in the I2C register. A determination may also be made at step 325 whether to temporarily or permanently disable the transmitter. If temporarily, the duration of the disability is decided upon and a timer is set for enablement (steps not shown). In one embodiment, however, the optical transmitter will simply be off until a service representative can repair or replace the ONT or verify that its operation is in fact correct. If a determination is made not to disable the transmitter (as will often be the case), then reading the register 325 simply continues according to the then-current schedule. In some embodiments, this schedule may also be varied from time to time.

In this manner, the present invention provides a way to regulate ONT behavior, and rogue behavior in particular, and do so autonomously.

Figure 4 is a flow diagram illustrating a method 400 of detecting rogue behavior in an optical transmitter according to an embodiment of the present invention. As with the embodiment of Figure 3, this embodiment will be described in the context of an ONT operating in a PON, though other implementations are possible, and at START it is presumed that the components necessary to execution of the process are available and operational. Unlike the embodiment of Figure 3, however, the embodiment of Figure 4 will be more advantageously implemented after the ranging process has been completed and the ONT has begun regular operations. This preference, however, is not a requirement of either embodiment.

With this in mind, the embodiment of Figure 4 begins with setting a suspect rogue flag according to indications provided by an output parameter (step 405). This may be accomplished, of course, as described above in reference to Figure 3. In most embodiments, this will be the case, although in some embodiments another means of

setting the suspect rogue flag may be used. Note that here, setting the suspect rogue flag includes removing or unsetting as warranted and permitted under whatever scheme is being implemented. The process then includes reading (step 410) the register in which the flag has been set. The process of reading the register is analogous to step 325 in method 300 shown in Figure 3, although in the embodiment of Figure 4, a different schedule for reading may be preferred. Note that when used herein, “reading the register” connotes examining a memory device to see if the suspect rogue flag has been set; no other structural or procedural limitations are implied, although they may be explicitly recited in some embodiments.

In the embodiment of Figure 4, a determination is then made (step 415) as to whether a disable condition exists. Generally speaking, this step is analogous to the disable determination 330 of method 300. In the embodiment of method 400, if a determination is made that no disable condition exists, the process simply returns to continuing the operation of reading the register 410. In this embodiment, however, if a determination is made that a disable condition does exist, then a network status query is generated (step 420) and transmitted toward the OLT or other central network device. As should be apparent, this transmission may or may not be successful, depending on network conditions. It is possible, of course, that the ONT or other network component executing the method 400 may be contributing to any network problems that do exist. In any case, the ONT then determines whether a response to the network status query has been received (step 425).

In the embodiment of Figure 4, if no response has been received, then a disable command is generated (step 460) in order to disable the optical transmitter. As with the embodiment of Figure 3, this may be a permanent or temporary disable command. In this way, the possibly rogue ONT can be prevented from transmitting further, that is, its rogue behavior controlled, even if communication through the network is not currently possible. If the disable command generated at step 460 is temporary, a timer in the ONT can be set for the generation of an enable command (not shown) at a later time. It is possible that at

this later time, whatever caused the rogue behavior (or, rather, the led to the detection of suspect rogue behavior) will have been alleviated. It is also possible that communication with the OLT will then be possible.

In this embodiment, if a response is received from the OLT at step 425, then the status of the network is determined (step 430) from the response (and possibly by considering other factors as well. If the OLT reports that PON performance is satisfactory, that is, that no perceivable problems exist, then the process returns to step 410 and register reading continues. If, on the other hand, the OLT reports unsatisfactory, that is, that network problems exist, then the ONT generates a command to disable the optical transmitter temporarily (step 435).

Here, it is noted that if the OLT perceives problems in the network, but knows their origin or at least perceives that they do not originate with the inquiring ONT, it may simply transmit a satisfactory response, and as a result the ONT will (proceeding through step 430) not disable the optical transmitter, at least not for this reason. In some implementations, the ONT may be configured to generate an optical transmitter disable command even if a satisfactory response is received, either based on certain other detectable conditions or the content of the OLT's "satisfactory" message.

In a preferred embodiment, the OLT provides additional information or instructions, rather than simply indicating that the network is unsatisfactory. It may, for example, indicate that the source of the network problems is presently unknown or otherwise provide an indication of what the problems might be. The OLT may also provide an indication of how long of a temporary disable should be executed. In some implementations, the OLT may also simply be able to cause the ONT to be disabled without further messaging. It may do so, for instance, based on network conditions and the network status inquiry received from the ONT.

In the embodiment of Figure 4, at some point after the temporary disable command of step 435, the ONT generates and transmits a network status update query (step 440). Naturally, in most cases it must use the optical transmitter for this purpose,

and so the transmitter will be enabled, perhaps but not necessarily for just enough time to deal with this communication. If no reply is received, or if the reply indicated that network conditions improved during the transmitter outage, then a disable command is generated (step 460). As should be apparent, this decision is based on the assumption
5 that if network conditions improved when the ONT transmitter was not operational, the suspect rogue behavior is confirmed. It is noted, however, that in some cases a false confirmation may occur – that is, that in some circumstances a normally functioning transmitter may be disabled. For this reason, in some embodiments the temporary disable and status update query steps may be repeated one or more times before the transmitter is
10 permanently disabled.

Finally, according to this embodiment if a network status update reply indicates that network conditions did not improve when the ONT disabled its transmitter, then the optical transmitter is enabled (step 450) and returns to normal operation, including the operations of setting the suspect rogue flag and reading the register to determine its
15 status. Of course, in embodiments where the transmitter was enabled to send the network status update query and not subsequently disabled, this step simply allows the transmitter to remain enabled.

In this manner, the present invention provides a way to regulate ONT behavior, and rogue behavior in particular, and do so autonomously – though an attempt is made to
20 communicate with the OLT and take advantage of any reply that is received.

Note that the sequences of operation illustrated herein are exemplary illustrations and not meant to exclude other embodiments. For example, the operations of the methods may be performed in any logically-consistent order. In addition, other steps may be added, or in some cases removed, without departing from the spirit of the
25 invention.

Although multiple embodiments of the present invention have been illustrated in the accompanying Drawings and described in the foregoing Detailed Description, it should be understood that the present invention is not limited to the disclosed

embodiments, but is capable of numerous rearrangements, modifications and substitutions without departing from the invention as set forth and defined by the following claims.

CLAIMS:

1. A method of regulating rogue behavior in an optical network component comprising an optical transmitter, the method comprising:

5 monitoring a selected optical transmitter output indicator during at least one monitoring window;

determining whether an output threshold has been exceeded during the at least one monitoring window;

10 setting a suspect rogue flag in a register, if it is determined that an output threshold has been exceeded; and

reading the register, by the optical network component, to determine if the suspect rogue flag has been set.

15 2. The method according to claim 1, wherein reading the register comprises a plurality of successive readings, each to determine if the suspect rogue flag has been set.

3. The method according to claim 1, wherein the at least one monitoring window comprises a plurality of monitoring windows.

20 4. The method according to claim 3, wherein setting the suspect rogue flag comprises removing the suspect rogue flag from the register if it determined that the output threshold was not exceeded in a monitoring window occurring after the suspect rogue flag has been set.

25 5. The method according to claim 1, further comprising determining whether to disable the optical transmitter.

6. The method according to claim 5, further comprising generating a command to disable the optical transmitter.

5 7. The method according to claim 5, wherein the optical network component is an ONT in a PON.

8. The method according to claim 7, further comprising attempting to transmit a PON status request message from the ONT to an OLT prior to determining whether to disable the optical transmitter.

10

9. The method according to claim 8, further comprising determining not to disable the optical transmitter if a reply to the status request message is received from the OLT indicating that the PON is functioning satisfactorily.

15

10. The method according to claim 8, further comprising generating a command to disable the optical transmitter if no response is received from the OLT within a predetermined period of time.

20

11. The method according to claim 8, further comprising, if a reply to the status request message is received from the OLT indicating that the PON is not functioning satisfactorily, transmitting a temporary disable message to the OLT and generating a command to temporarily disable the optical transmitter.

25

12. The method according to claim 11, further comprising generating a command to disable the optical transmitter, after expiration of a disable period generating a command to enable the optical transmitter, and attempting to transmit a PON status update request message to the OLT.

13. The method according to claim 1, wherein the optical transmitter comprises a laser and the selected optical transmitter output indicator is the LBC.

14. The method according to claim 1, wherein the optical transmitter
5 comprises a monitor photodiode and the selected transmitter output indicator is the MPC.

15. Apparatus for regulating rogue behavior in an optical transmission device, comprising:

an output indicator monitor;

10 a register for storing a suspect rogue flag if the output indicator monitor detects that an output indicator threshold has been exceeded during a monitoring window;

a reader for reading the register to determine whether a suspect rogue flag has been set; and

15 a determiner for determining whether to disable the optical transmitter if a suspect rogue flag has been set.

16. The apparatus according to claim 15, further comprising a command generator for generating optical transmitter disable commands.

20 17. The apparatus according to claim 16, further comprising a timer for timing the duration between a temporary disable command and an enable command.

18. The apparatus according to claim 15, further comprising an optical transmitter comprising a laser, and wherein the output indicator monitor monitors a laser
25 bias current.

19 The apparatus according to claim 15, wherein the output indicator monitor monitors a monitor photodiode current.

20. An ONT for use in a PON, the ONT comprising:
- a network interface comprising an optical transmitter and an optical receiver;
 - a memory device comprising a register;
 - an output indicator monitor for monitoring at least one output indicator of the
- 5 optical transmitter;
- a reader for reading the register to determine whether a suspect rogue flag has been set by the output indicator monitor; and
 - a determiner for determining whether to disable the optical transmitter if a suspect rogue flag has been set.

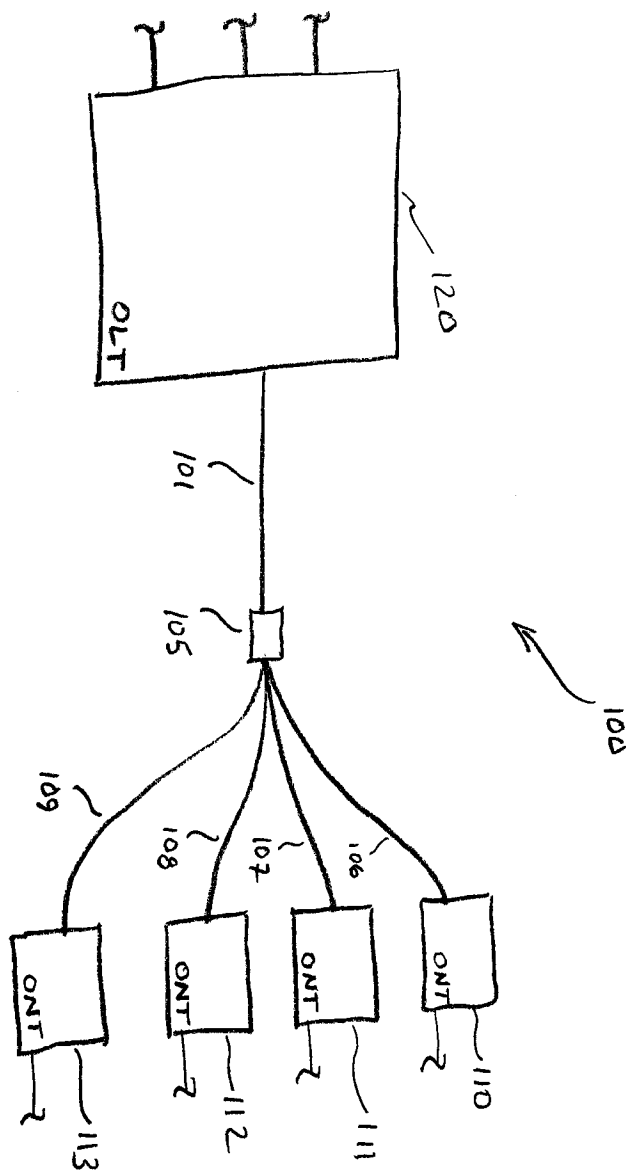
ABSTRACT

A method and apparatus for regulating rogue behavior in optical transmission devices. The apparatus, for example, may be implemented in one or more of the ONTs in a PON. The ONT includes an optical transmitter that may be disabled by a command
5 generated by the ONT itself if rogue behavior is detected or suspected. To detect rogue behavior, at least one output indicator, such as LBC or MPC, is monitored during one or more monitoring windows. If monitoring indicates that the optical transmitter is transmitting more than a pre-determined threshold, a suspect rogue flag is set, for example in an I2C register. The register is read, preferably a number of successive times,
10 and a determination is made whether to disable the optical transmitter. In some embodiments, the OLT is queried as part of this determination. The disability may be permanent, until a manual service operation, for example, or temporary.

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Fig. 1



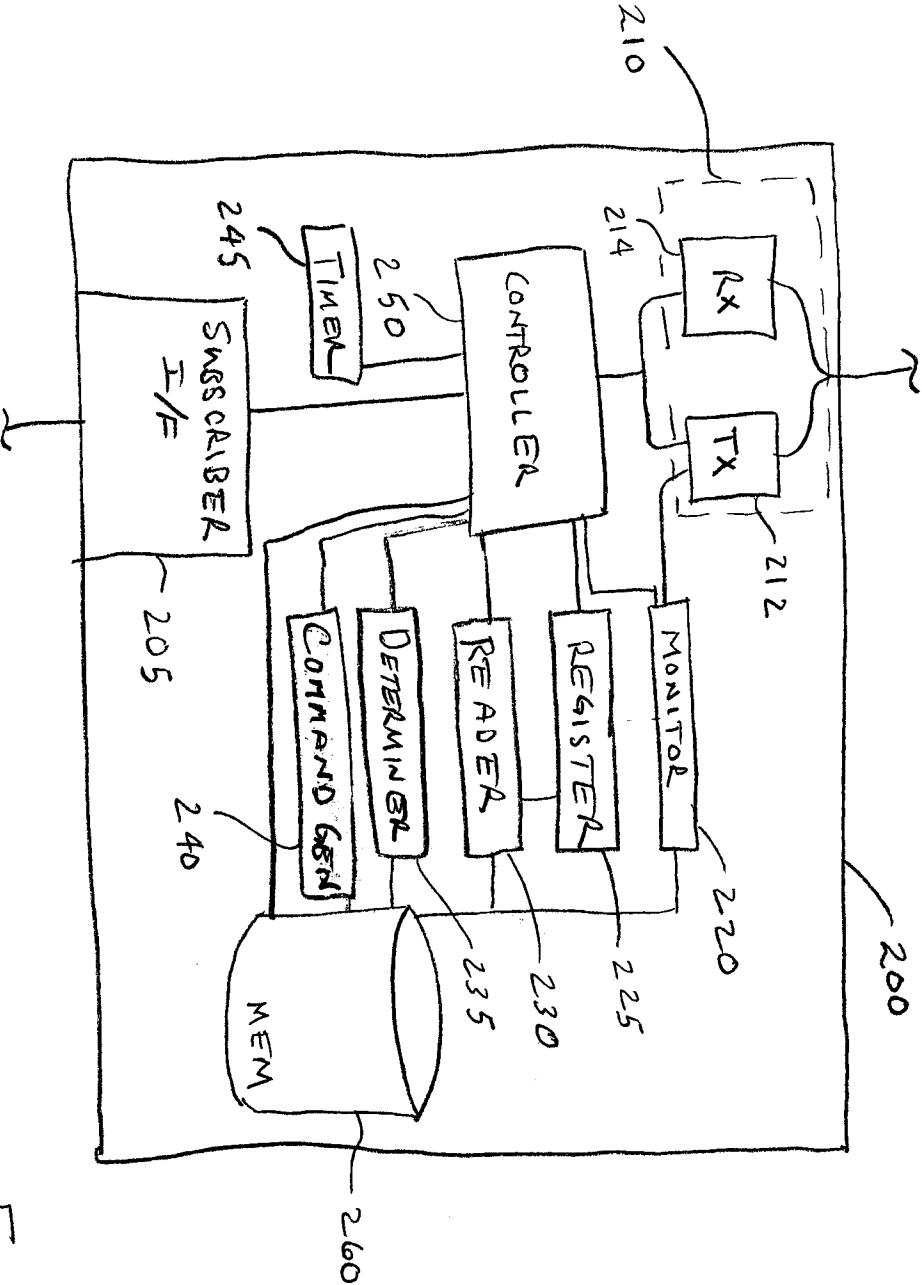
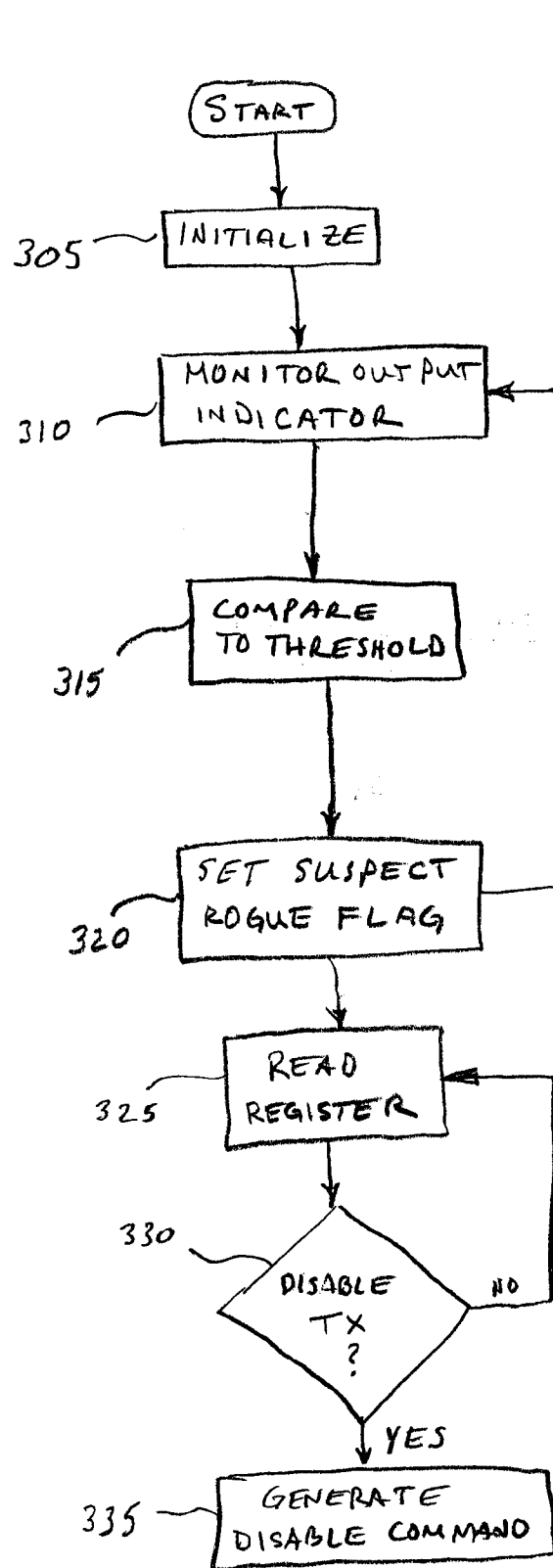
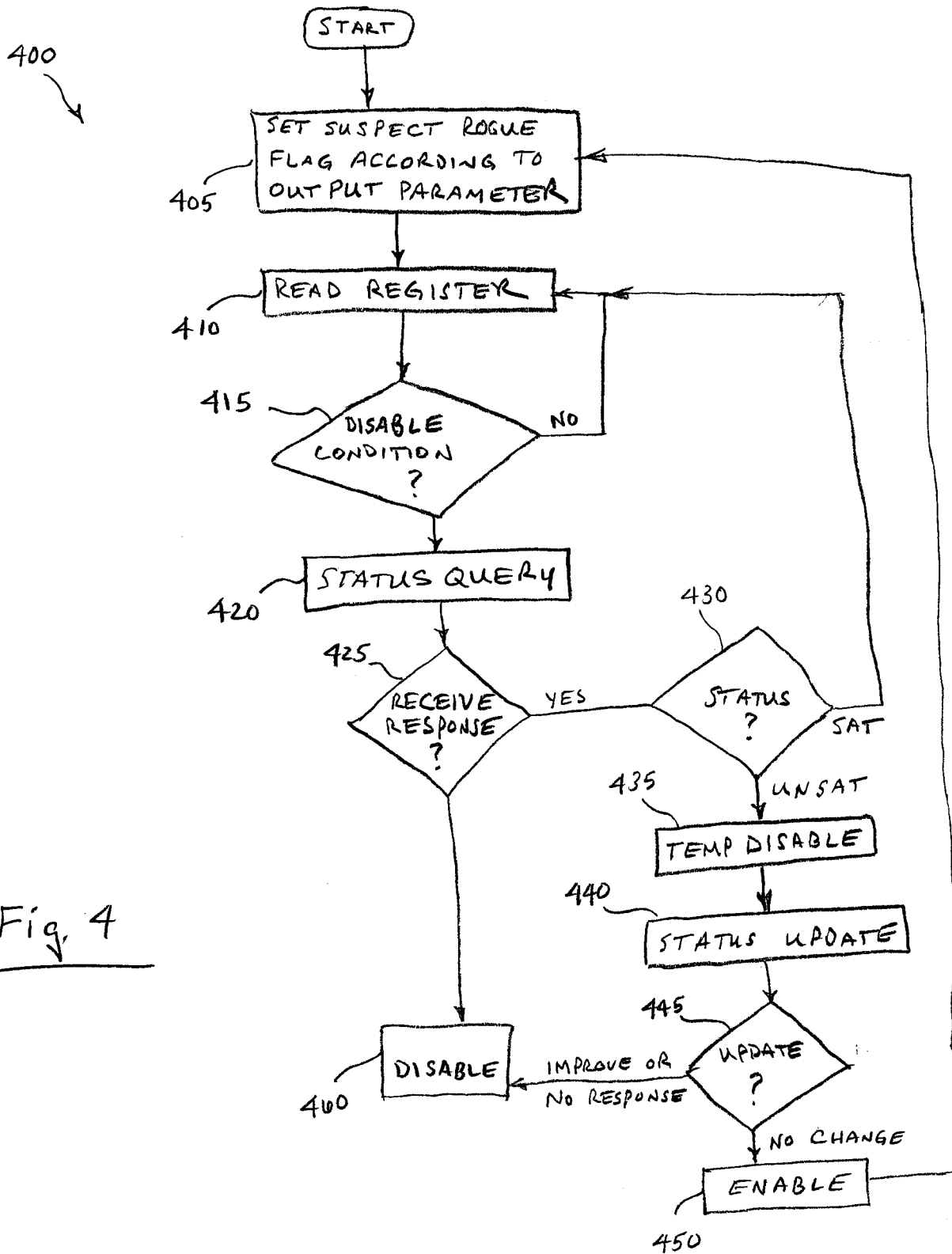


Fig. 2





Electronic Patent Application Fee Transmittal

Application Number:				
Filing Date:				
Title of Invention:	Method and Appartus for Regulating Rogue Behavior in Optical Network Transmission Devices			
First Named Inventor/Applicant Name:	Joseph L. Smith			
Filer:	Stephen Wyse/Joan Shields Mooneyham			
Attorney Docket Number:	805792			
Filed as Large Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Utility application filing	1011	1	330	330
Utility Search Fee	1111	1	540	540
Utility Examination Fee	1311	1	220	220
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				1090

Electronic Acknowledgement Receipt

EFS ID:	6726789
Application Number:	12649606
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Confirmation Number:	5836
Title of Invention:	Method and Appartus for Regulating Rogue Behavior in Optical Network Transmission Devices
First Named Inventor/Applicant Name:	Joseph L. Smith
Customer Number:	22046
Filer:	Stephen Wyse/Joan Shields Mooneyham
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Attorney Docket Number:	805792
Receipt Date:	30-DEC-2009
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Payment Type	Deposit Account
Payment was successfully received in RAM	\$ 1090
RAM confirmation Number	7536
Deposit Account	122325
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Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal of New Application	805792_Utility_Patent_Application_Transmittal_Form.pdf	76015 15bbec35a58bcabbf448d3b474fba8e60fa2b8ba	no	2
Warnings:					
Information:					
2	Application Data Sheet	805792_App_Data_Sheet.pdf	41308 fb3bfd44ade002a9ea01ce2cc169cb71fd894bd5	no	4
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3	Specification	805972_Specification.pdf	99060 5f942181f984ca56a72946c47340ac6dffe6c7a7	no	18
Warnings:					
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4	Claims	805972_Claims.pdf	29731 c0b52a3810580b419938c639b32c70bf8b219296	no	4
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5	Abstract	805972_Abstract.pdf	19896 77f2001fac2e067733be77d264629b530fdd63e8	no	1
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6	Drawings-only black and white line drawings	805792_Informal_Drawings.pdf	71516 9a4fc8a43455c4b823548b90828804ecea3c8f32	no	4
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If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

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Filing Date: 12/30/09

Approved for use through 7/31/2006. OMB 0651-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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PATENT APPLICATION FEE DETERMINATION RECORD					12/649,606																																									
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INDEPENDENT CLAIMS (37 CFR 1.16(h))	3	minus 3 =																																												
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$270 (\$135 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).																																													
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<p>* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.</p> <p>** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".</p> <p>*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".</p> <p>The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.</p>																																														

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